Avid | DS

WORKSTATION SETUP & ADMINISTRATION GUIDE

VERSION **6.01**

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The Avid|DS application uses JScript and Visual Basic Scripting Edition from Microsoft Corporation.

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FCC Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed in accordance with the instruction manual, may cause harmful interference to

radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canadian ICES-003

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union Notice

CE

Declaration of Conformity (According to ISO/IEC Guide 22 and EN 45014)

Application of Council Directives:	73/23/EEC, 89/336/EEC.
Standards to which Conformity is Declared:	EN60950:1992 + A1 + A2 + A3 + A4 + A11 CISPR 22:1985 / EN55022:1988 Class A EN55024:1998 + A1
Manufacturer's Name:	Avid Technology, Inc. 1925 Andover Street Tewksbury, MA 01876, USA
European Contact:	Nearest Avid Sales and Service Office or Avid Technology Sales Ltd. Sandyford Business Center Unit 3, Dublin 18, Ireland
Type of Equipment:	Information Technology Equipment
Product Name:	Products for the Windows 2000 Operating Systems: Avid|DS
Base Model Numbers:	None
Product Options:	All
Year of Manufacture:	2002

Products for the Windows 2000 Operating Systems: products were tested in a typical Avid|DS configuration.

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.

George R. Smith, Director of Hardware Design and Development

Australia and New Zealand EMC Regulations

N1709

John Kells, Australian Operations Manager
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Taiwan EMC Regulations BSMI Class A EMC Warning

警告使用者:
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

The Avid|DS 6.x computer and the Equinox box are a 2-part system. The I.D. number and warning label will be placed on the bottom of the Avid|DS 6.x computer.

Warnings

To reduce the risk of electrical shock, do not attempt to open the equipment unless instructed. Do not use a tool for purpose other than instructed.

Cast and Crew: Sylvain Labrosse, Luc Langevin, Marianne Rodrigues, Liven Tam, and Art Wright.

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Contents

Before You Start 5

The Avid|DS Learning Roadmap 6
Using the Documentation Library 8
Document Conventions 8
Avid|DS Customer Support 10
Hotline Support 10
E-mail Support 10
Web Support 10
FTP Support 11
Mailing List 11
Comments? 11

Chapter 1 **Package Contents** 13

Package Contents 15
Hardware 15
Software 16
Documentation 17

Chapter 2 **Site Preparation** 19

Site Planning 21
Environmental Requirements 21
Electrical Requirements 21
Space Requirements 22
Additional Equipment 24

Chapter 3 **System Overview** 25

Back Panel Overview 27
Workstation Cards 27
Port Locations 30
Disk Subsystem 31
System Inputs and Outputs 32
Signal Flow 33
House Sync 34
Tri-level Sync 34
Sync Topology 35
Removing and Installing the Fan 36

Chapter 4 **Assembling the System** 39

Before Assembling the System 41
The Keyboard, Mouse, and Graphic Tablet 42
The Computer Monitors 43

The Avid Equinox Break-Out-Box 44
The Avid MediaDock LVD 47
Single-Enclosure Configuration 48
Two-Enclosure Configuration 49
Three-Enclosure Configuration 50
Avid Unity MediaNetwork 52
Installing the ATTO Optical Fibre Channel Controller 52
The Machine Control Cable 53
The USB-to-MIDI Converter 54
The Peripheral Devices 55
Video Connections 55
Audio Connections 57
The Software Protection Key 59

Chapter 5 **Upgrading Your Workstation** 61

Preparing to Upgrade 63
Drivers to Install 64
Installing the System BIOS and Drivers 65
Installing the System BIOS for the Compaq W8000 System 65
Installing the System BIOS for the IBM Z Pro 6866 System 66
Installing the Avid Drivers 68
Upgrading the Avid Equinox Subsystem Firmware 68
Installing the Avid Equinox Video Subsystem Driver 69
Installing the Merging Mykerinos Driver 70
Installing the Avid Startup Driver 71
Installing the Wildcat Driver 71
Installing the SCSI Drivers 73
Installing Drivers for Compaq W8000 Systems 75
Installing the Intel Chipset Drivers 75
Installing the Intel Pro100 Network Driver 75
Installing the Logitech Mouse Driver 76
Installing the SoundBlaster AudioPCI128 Driver 77
Uninstalling Avid|DS 79
Removing Plug-ins 79
Removing the PICVideo MJPEG Codec 79
Removing Avid|DS 80

Chapter 6 **Installing Avid|DS** 81

Before You Install the Software 83
Standalone Avid|DS Workstation Configuration 83
Avid|DS Workgroup Configuration with RP Station 83
Avid|DS Workgroup Configuration without RP Station 84
Avid|DS Software and Services 85
About the Avid Indexing Services 86
Preparing to Set Up an Avid|DS Workgroup 87

Installing Avid|DS 88
Loading Plug-Ins 97
Installing and Removing Fonts 98
Installing and Removing Type 1 Fonts 98
Installing and Removing TrueType Fonts 98
Installing Non-European Fonts 100

Chapter 7 **Licensing Avid|DS and Avid|DS RP** 103

Requesting a License File 105
Softimage Licensing Program 106
Creating a Valid License File 108
Solving Licensing Problems 110

Chapter 8 **Installing the Remote Processing Software** 113

An Introduction to Avid|DS Remote Processing 115
Remote Processing Concepts 115
Avid|Throttle Manager 116
Avid|DS RP Station Requirements 117
CPU Usage on Avid|DS RP Stations 118
Typical Networking Configurations 119
Point-to-point Setup 119
Workgroup Setup 119
Optimizing the Network 121
Authentication and Security 121
Networking Protocol 121
Network Addressing 122
Network Hardware and Remote Processing Performance 122
Installing Avid|DS RP 123
Licensing Avid|DS RP 128
Installing Avid|Throttle Manager 129
Troubleshooting Avid|DS RP 130

Chapter 9 **Managing Your Windows 2000 Workstation** 135

Folders Installed on Your System 137
The DS_v6.x Folder 137
The DS Archives Folder 138
The DS Projects Folder 138
The DSPresets Folder 138
The VideoStorage Folder 138
The AudioStorage Folder 139
The DSSystem Folder 139
Managing User Accounts 140
Drive Maintenance 144
Defragmenting your Drives 144
About Striping 146

Creating a Stripe Volume 147
Striping the Drives 149
Importing Foreign Disks 154
Creating an Emergency Repair Disk 155

Chapter 10 **Using the Recovery CD** 157

Installing the Recovery CD. 159
Complete Rebuilding the System 160

Before You Start

The Avid|DS Learning Roadmap

The Avid®|DS package includes a comprehensive set of learning materials. With this Roadmap, you'll know where to find the information you need to get up and running quickly and effectively.

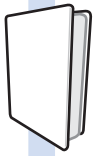
Start with the **Workstation Setup & Administration Guide** to prepare your site for Avid|DS. This includes assembly of your workstation, reinstalling and/or licensing any of the components, and tips on the daily maintenance of your system.

Use the **Drivers CD** if you need to reinstall or update the drivers for any of the components or troubleshoot problems with Avid|DS. This CD also contains PDF versions of all the documentation and a few utilities you may find useful.

Note: In order to view the documentation on the CD, you need Adobe Acrobat Reader 5.01 and QuickTime version 5.0 or later installed. Acrobat Reader is included on the Drivers CD. QuickTime can be downloaded from the Apple website.

Refer to the **Release Notes** for feature limitations and workarounds.

If you're new to Avid|DS, work through the **Getting Started** book to learn how to use the features in the context of a basic production. This full-color tutorial gives you step-by-step instructions on how to create a two-minute spot.

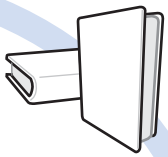


If you're already familiar with Avid|DS, read the **New Features Guide**; it briefly describes all the new features in version 6.

Avid|DS Discussion Group

You can join the worldwide network of Avid|DS users exchanging ideas and techniques by e-mail. To subscribe, send an e-mail to **majordomo@softimage.com** with the following text in the body of your message: **subscribe ds**.

At **Avid|DS Authorized Training Centers (ATCs)** around the world, you can further your Avid|DS education by attending the DS-101, DS-201, & DS-301 courses. These multi-day courses teach you about the interface and workflow while producing short projects. For details, visit **http://avid.com/training**.



The **User's Guide** contains comprehensive information on how to perform basic and advanced post-production tasks.

The **Compositing & Effects Guide** contains information and visual examples on how to use effects in Avid|DS, and shows you how to perform compositing and tracking.

The **Drivers CD** contains all the Avid|DS documentation in electronic form (PDF format). See next page for how to use the Documentation Library.

The **online help** contains on-screen reference information on interface elements, commands, and parameters. There are two ways to access it:

- Click the **?** icon or Help button in any property editor, dialog box, or view.
- Choose **Help > Contents and Index** from the main menu bar in Avid|DS.

Comments?

We'd appreciate any comments or suggestions you may have about this book or any other piece of our documentation. Just send them to: **dsdocs@avid.com**.

Keyboard shortcuts are available from the Help menu in Avid|DS. Print out the **Keyboard Shortcuts** card and keep them close at hand.

Using the Documentation Library

The Documentation Library contains all the Avid|DS documentation in PDF format. If it was installed on your system, you can access it from the Help menu in Avid|DS.

You will need Adobe Acrobat Reader installed to view the documentation online.

To access the Documentation Library

- In Avid|DS, select **Help** > **Documentation Library**.

or

1. Insert the Drivers CD in your CD-ROM drive.
2. From the main menu, select **Avid|DS Documentation**.

To install Adobe Acrobat Reader

1. Insert the Drivers CD in your CD-ROM drive.
2. Under the Various section, select **Utilities**.

Document Conventions

This guide uses the following symbols and conventions:

Bold	Bold is used for menu commands, dialog box and property editor options, and file/folder names.
Italics	Italics place emphasis on certain words.
>	The greater than (>) sign indicates menu commands (and subcommands) in the order that you choose them. For example, **File** > **Import** means to open the File menu and then choose the Import command. This applies to menus from the main menu bar and pop-up menus that appear when you right-click on the interface.

Notes are reminders or contain important information.

Tips are useful bits of information, workarounds, and shortcuts that you may find helpful in a particular situation.

Warnings are used when you can lose or damage information or equipment, such as deleting data or not being able to easily undo an action. Warnings always appear *before* you attempt a task!

Information that is specific to the Avid|DS HD Editor system only.

Mouse, Pen and Keyboard

In Avid|DS, you can use a two-button mouse (with wheel) or a pen and tablet. The left and right mouse buttons perform different operations. Unless otherwise stated, use the left mouse button.

The mouse and pen operate slightly differently. All the procedures in this guide are documented for the mouse. You can, however, easily use a pen or the keyboard. The following table shows the terms relating to the mouse, pen, and keyboard.

This term	Means this with a mouse	Means this with a pen
Click	Quickly press and release the left mouse button. Always use the left mouse button unless otherwise stated.	Tap the tablet once with the tip of the pen, or touch the pen to the tablet with enough pressure to click.
Double-click	Click the left mouse button twice rapidly.	Quickly tap the tablet twice in the same screen pixel or press the F5 key to go from single to double-click.
Right-click	Quickly press and release the right mouse button.	Press the top portion of the switch on the side of the pen or press the F6 key to go from left to right-click.
Drag	Hold down the left mouse button or the wheel while you move the mouse.	Press the pen to the tablet while moving the pen.
Alt+*key*, Ctrl+*key*, Shift+*key*, *etc.*	Hold down the first key while you press the second key. For example, "Press Alt+F1" means to hold down the Alt key while you press the F1 key.	

Customizing the Pen or Mouse

By customizing the pen, you can adjust the click pressure, switch functions, and other features. For information on customizing the pen, refer to the documentation provided with your Avid|DS system.

You can also customize the mouse. For example, you can select left-handed configuration or change the double-click speed. For information on customizing the mouse, refer to the Windows online help.

Avid|DS Customer Support

Customer support for Avid|DS is provided by your Avid local reseller working together with Avid|DS Customer Support. Immediate assistance for any technical issue is available through your local Avid reseller, our North American hotline, e-mail, and FTP support services.

Hotline Support

Avid resellers provide first line support for Avid|DS according to their specific geographical area and time zone. Working as an extension of Avid|DS Customer Support, these fully trained agents provide the most efficient and effective support possible to all our customers.

Contact information for your Avid reseller is available through the Avid Reseller Locator at **http://avid.com/cgi/locator/index.asp** or www.avid.com.

You can reach Avid|DS Customer Support in North America:
tel: 1 800 800-AVID (2843)
fax: 514 845-8252

9:00 am to 9:00 pm (Eastern)
2:00 pm to 2:00 am (GMT)

Hotline assistance is also available 24 hours a day, 7 days a week for an additional fee.

For international enquiries and support services, contact your local Avid Reseller. Support offerings may vary per location.

E-mail Support

The Avid|DS e-mail address for customer support is: **dssupport@avid.com**.

You can use it for sending bug reports, usability questions, and avidds.cab audit reports for system analysis. All e-mails are logged in the support database and assigned a case number. Send one support request per e-mail.

It is mandatory that you include your SID number in the body of your e-mail message for verification of your maintenance contract and case logging, otherwise response will be delayed.

Web Support

The Avid|DS Customer Support and Download sections at **http://www.softimage.com/avidds** provide quick access to a wide range of resources from the Avid|DS teams and user community. Downloads, including presets, drivers, and Quick Fix Engineering (QFE), provide the latest solutions for using with your Avid|DS system. Online documentation, tutorials, and Knowledge Base articles ensure that you get the most out of your work with Avid|DS. It's like having a dedicated Avid|DS Customer Support engineer sitting at your desk!

FTP Support

For trouble shooting purposes, an FTP server is available for uploading large files for Avid|DS Customer Support personnel to examine. You can upload a project's archive, media files, or other large piece of data. Simply zip the files to upload and use a short name for easy retrieval, such as archive.zip or Case274877.zip. You can use a Windows Command Prompt or an FTP application to upload files to our server.

Command Prompt Commands

Command	Description
Site access	ftp ftp.softimage.com [Enter]
Folder access	cd incoming [Enter]
User name	anonymous [Enter]
Password	"your e-mail address" [Enter]
Transfer mode	bin [Enter]
Upload command	Put "path:\file name" [Enter]

Once the file upload is complete, send an e-mail to **dssupport@avid.com** to inform Customer Support as there is no automatic notification when a file is uploaded on the FTP server. Please provide the complete and exact file name (case sensitive) to retrieve.

Mailing List

Although the Avid|DS mailing list is frequently monitored by Avid employees, it is not part of the official support channels. You are invited to send your support requests to any of the above channels when required.

If you have an e-mail account, you can join the worldwide network of Avid|DS users exchanging ideas. The mailing list has proven to be quite useful for users, with a constant stream of new subscribers.

To subscribe, send an e-mail to **majordomo@softimage.com** with the following text in the body of your message: **subscribe ds**. You can get further information on using the automated list server by e-mailing **majordomo@softimage.com** with "help" as your message.

Comments?

We'd appreciate any comments or suggestions you may have about this book or any other piece of our documentation. Just send them to: **dsdocs@avid.com**.

Chapter 1 Package Contents

In This Chapter...

This chapter provides an overview of the hardware, software, and documentation included with your Avid|DS workstation.

Package Contents. 15

Package Contents

Your Avid|DS workstation contains hardware, software, and documentation.

Hardware

After carefully unpacking the hardware, verify all of the items on the packing slip before setting up your workstation. And, make sure that you write down the serial number of all the devices.

Your workstation contains the following hardware:

Device	Device, cables, and accessories
Compaq W8000 Workstation	• Base unit • Keyboard • Mouse • 2 optical cables (for Mykerinos audio card) • Power cable • Rackmount kit (optional)
21-inch monitors	• 2 21-inch monitors • 2 monitor cables and two VGA to DVI adapters • 2 power cables
Avid MediaDock™ LVD storage system	• MediaDock LVD enclosure • 8 MediaDock LVD shuttles (for HD systems) • 4 MediaDock LVD shuttles (for SD systems) • Power cable • LVD cables
Avid Unity™ Media Network Fibre Channel storage system	• Depends on the Avid Unity Media Network system ordered
Avid Equinox™ Break-Out-Box	• Break-Out-Box • Digital tether cable • USB and BNC cables • Power cable
WACOM tablet	• Tablet • Pen and stand • USB cable • 4D mouse
DUA II audio convertor (standard with HD systems)	• Convertor • 2 optical cables • Power cable
DataMate/Rosetta Stone (RS-232 to RS-422 convertor for deck control)	• Convertor • RS-232 cable • RS-422 cable

Software

If you receive a news system most of the software that you receive on CD is also installed on your workstation's hard drive. You should keep the Software, Drivers, and Recovery CDs in a safe place in case you need to reinstall the software or any of the drivers.

The Avid|DS software package contains:

- Avid|DS Software CD
- Avid|DS Drivers CD
- Two Avid|DS Recovery CDs
  - One for the IBM 6866
  - One for the Compaq EVO W8000
- Software protection key (dongle)

Your workstation comes with the following software components pre-installed on your workstation:

- Windows 2000 Professional and Windows 2000 Service Pack 2 software
- Merging Technologies Mykerinos
- WACOM software
- 3Dlabs Wildcat 6210 software

The documentation for the software components is also shipped with the system.

Documentation

The complete Avid|DS documentation set includes:

All online Avid|DS documentation has been upgraded to v6.01. Please refer to the Documentation Library from the Help menu in Avid|DS.

Document	Format	Version	Description
Release Notes	Print	6.01	Describes known problems and provides workarounds.
Workstation Setup & Administration Guide	Online/ Print	6	Shows you how to prepare for and set up your workstation hardware. Provides instructions on how to upgrade to or reinstall the current version of Avid|DS, and perform workstation administration tasks.
New Features Guide	Online/ Print	6	Briefly describes the new features in version 6 of Avid|DS.
Online Help	Online	6.01	Contains reference information on: • Layouts and views • Parameters in property editors and dialog boxes • Commands in toolbars and pop-up menus.
Keyboard Shortcuts card	Online	6.01	Contains all the Avid|DS keyboard shortcuts. You can slide it under the cover sheet of your graphic tablet.
Getting Started	Online/ Print	6	Contains basic step-by-step lessons with specific examples, so you can start working with Avid|DS.
User's Guide	Online/ Print	6	Describes the work processes of Avid|DS and shows you how to perform basic and advanced tasks in every phase of post production, from capturing material to outputting a finished sequence.
Compositing & Effects Guide	Online/ Print	6	Describes the basic types of effects in Avid|DS and shows you how to apply them to your media. There's also information on when and how to process effects.
Vendor documentation	Print	--	Guides from the vendors of the various hardware components that comprise your Avid|DS workstation. **Note**: For details on setting up, handling, and maintaining these components, refer to the documentation included with each of them.

Chapter 2 Site Preparation

In This Chapter...

This chapter describes how to prepare your site for an Avid|DS workstation.

Site Planning 21
Additional Equipment 24

Site Planning

When preparing your site, you must consider the environmental, electrical, and space requirements for your Avid|DS workstation, as well as any additional equipment that you may need to purchase and its requirements.

Environmental Requirements

The site you choose for your Avid|DS workstation should meet the following environmental requirements:

- Clean and dust free
- Free from significant temperature or humidity changes
- Sturdy, level, and not subject to vibration
- Away from high-traffic or high-noise areas
- Provides adequate space in front of and behind the workstation components, so that you can connect cables and service your workstation. This also provides adequate air flow for cooling.
- A minimum clearance of 3 inches (7.6 cm) for the side and back panels of the desk side base unit
- A table (or other surface) that is at least 60 inches wide by 48 inches deep (150 cm × 120 cm) for the editing workstation

Electrical Requirements

Your site should meet the following electrical requirements:

- Adequate power for each workstation component, so that extension cords are not needed.
- At least two 15-amp circuits available; one for the workstation and one for the Avid MediaDock LVD storage(s).
- Site is away from major electrical equipment, such as motors, air conditioners, or elevators.
- Site is not subject to static electrical buildup.
- Uses an uninterruptible power supply (UPS) to protect your workstation from sudden power surges or losses, and save you from the resulting loss of work.

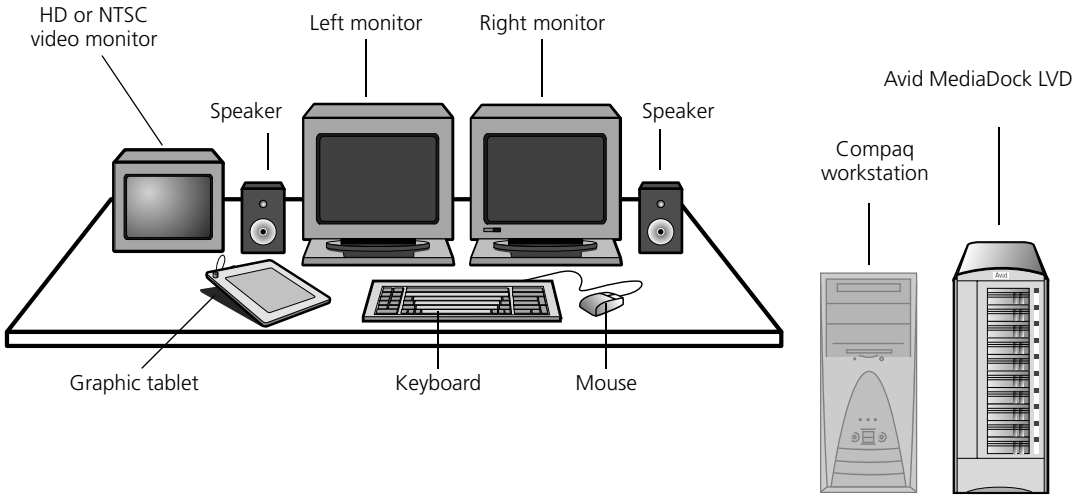
Plug only your Avid|DS equipment into the power strip. Do not plug in coffee makers, radios, lights, or other such devices.

In addition, make sure your site meets the following electrical specifications:

Component	Voltage	Frequency
Compaq W8000 workstation	100 to 240 V AC	50 to 60 Hz
21-inch monitors	100 to 240 V AC	50 to 60 Hz
Avid Equinox Break-Out-Box	100 to 240 V AC	50 to 60 Hz
Avid MediaDock LVD storage system	90 to 264 V AC (fully configured)	50 to 60 Hz
Avid Unity MediaNetwork Fibre Channel storage (standard definition version of Avid|DS only)	400 VA maximum (fully configured)	50 to 70 Hz
Merging DUA II audio convertor (included with HD systems only)	100 to 240 V AC	50 to 60 Hz
WACOM tablet	120 V AC (NA) 220 V AC (Intl)	60 Hz

Space Requirements

Your workstation includes either a tower or rack mount base unit, the video storage array, and two 21-inch monitors. You can place the workstation base unit and the video storage chassis next to your work area. The following illustration shows a typical tower configuration:



The speakers and video monitor are purchased separately. The video monitor and the computer monitor(s) should be placed at least 12 inches (30 cm) apart. Placing them closer together may cause synchronization interference on the computer monitor(s).

If you purchase the optional rack mount kit for the base unit, it mounts in a standard 19-inch equipment rack. The Avid Equinox Break-Out-Box, MediaDock LVD storage system, and DUA II audio convertor can also be mounted in the same or another equipment rack.

The following table lists the dimensions of the major hardware components:

Hardware component	Dimensions (inches)	Dimensions (centimeters)
Base unit (tower)	Height: 17.8 Depth: 23.3 Width: 8.3	Height: 45.2 Depth: 59.2 Width: 20.4
Base unit (rack mount)	--	--
21-inch monitor(s)	Height: 19.8 Width: 19.6 Depth: 20.0	Height: 50.3 Width: 49.8 Depth: 50.8
Avid Equinox Break-Out-Box (rack mountable)	Height: 5.3 Width: 17.6 Depth: 7.5	Height: 13.3 Width: 44.6 Depth: 19.5
Avid MediaDock LVD (tower)	Height: 18.8 Width: 10.5 Depth: 17.6	Height: 47.7 Width: 26.7 Depth: 44.8
Avid MediaDock LVD (rack mount)	Height: 5.3 Width: 17.6 Depth: 17.4	Height: 13.3 Width: 44.6 Depth: 44.2
DUA II (rack mountable) (included with HD systems only)	Height: 1.7 Width: 17.6 Depth: 6.9	Height: 4.3 Width: 44.6 Depth: 17.5
WACOM tablet	Width: 9 Depth: 12	Width: 22.9 Depth: 30.0

Additional Equipment

A typical Avid|DS workstation requires the following additional peripherals and cables:

Device	Description
House sync generator	The house sync must have the same video format as your video equipment, as well as the project that you create in Avid|DS. You will need a tri-level sync generator for HD projects.
Video monitor	HD or NTSC/PAL
Video tape recorder (VTR)	VTRs connect to the base unit through an RS-422 cable. (Contact your Avid|DS reseller for a list of approved HD VTRs)
Digital waveform monitor	Measures the luminance and chrominance video signals
Speakers and amplifier	Analog and/or digital audio equipment and converters for converting audio signals
Cables	Video: Use high quality 75-ohm coaxial cables with 75-ohm BNC coaxial connectors. Audio: Balanced cables
Standards convertors	Lets you convert between HD and other (NTSC and PAL for example) standards in order to accommodate archival footage coming from other formats or standards

Chapter 3 System Overview

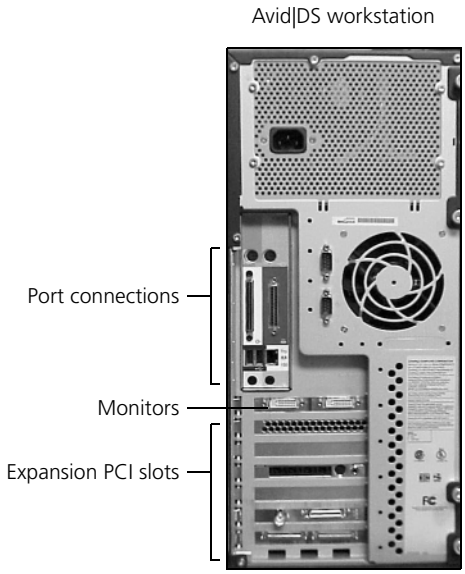
In This Chapter...

This chapter gives you an overview of the hardware included with your Avid|DS workstation.

Back Panel Overview 27
Disk Subsystem 31
System Inputs and Outputs 32
Signal Flow 33
House Sync 34
Removing and Installing the Fan 36

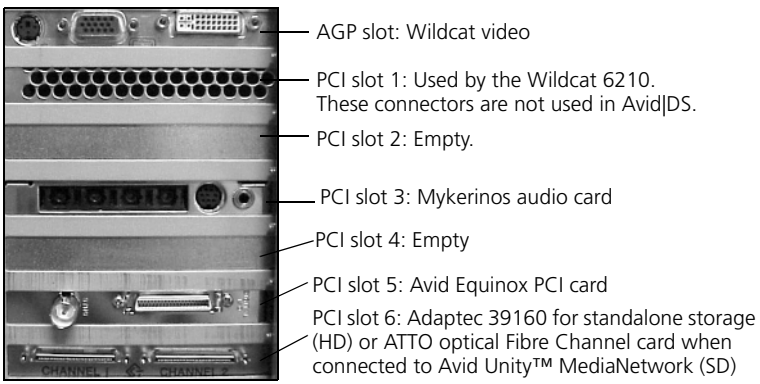
Back Panel Overview

On the back panel of your base unit, up to four expansion cards are installed for use with Avid|DS. The back panel also contains ports for connecting the mouse, keyboard, monitors, and software protection key (dongle).



Workstation Cards

The following illustration shows the placement of cards in the expansion slots of a deskside workstation. The table following the illustration provides more detailed information.



On a rack mount workstation, the AGP slot is to the left, and the PCI slot 6 is to the right when viewing the back of the workstation base unit.

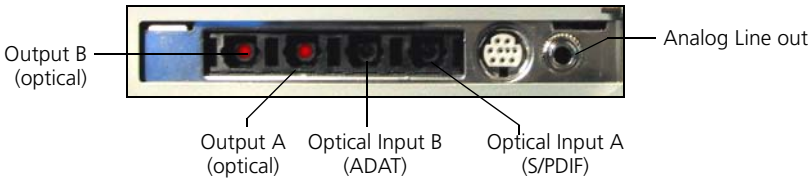
The following table describes the location and function of each expansion card installed in the workstation. Expansion cards are installed in the workstation's PCI and AGP slots. For details on card specifications and configuration, refer to the vendor documentation.

Slot	Card	Function
AGP	Wildcat 6210	Processes input from the Avid Equinox PCI card, handles OGL processing, and outputs video signal to workstation monitor(s)
PCI 1	Empty	None (space used by Wildcat 6210)
PCI 2	Empty	None
PCI 3	Mykerinos audio card	Processes and routes audio to optional devices
PCI 4	Empty	None
PCI 5	Avid Equinox PCI card	Processes video capture and playback I/O for the VTR and routes video to the Wildcat 6210 graphics card
PCI 6	• Adaptec 39160 on Avid|DS High Definition (HD), with Avid MediaDock LVD storage OR • ATTO optical card on standard definition (SD) systems with Avid Unity™ MediaNetwork	When using the Adaptec 39160 it processes input and output to the Avid MediaDock LVD storage system When used by the ATTO Optical card it processes input and output to the Fibre Channel storage on Avid Unity™ MediaNetwork

For more information on a specific expansion card, refer to the vendor documentation.

Mykerinos Audio Card Connections

The following illustration shows the connections on the Mykerinos audio card. For more information on the Mykerinos audio card, refer to the vendor documentation.



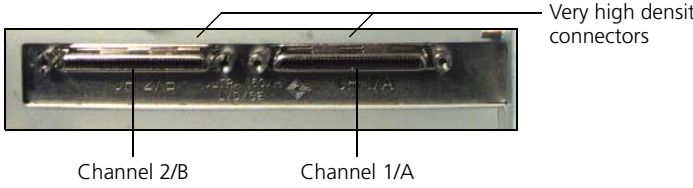
The optical outputs on the card are red.

Avid Equinox PCI Card Connections

The following illustration shows the connections on the Avid Equinox PCI card. For information on connecting your video and audio equipment to the Avid Equinox PCI card, see *The Peripheral Devices* on page 55.

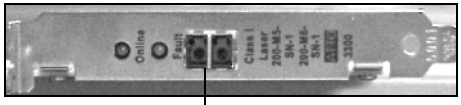
Adaptec Card Connections

The following illustration shows the connections on the Adaptec 39160 card. This is the storage adapter included with HD systems and with standard definition versions of Avid|DS that use the Avid MediaDock LVD storage. For more information on the Adaptec card, refer to the vendor documentation.



ATTO Optical Fibre Channel Card Connector

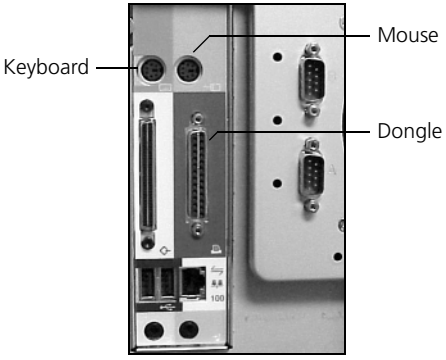
The following illustration shows the connector on the ATTO optical Fibre Channel controller. This is the storage adapter included with standard definition versions of Avid|DS SD that use the Avid Unity MediaNetwork. For more information on the ATTO card, refer to the instructions that ship with Avid Unity MediaNetwork.



Optical connector

Port Locations

The back panel also contains ports for connecting the mouse, keyboard, and software protection key (dongle).



Disk Subsystem

In a standard configuration, one Low-Voltage Differential Signaling (LVDS) SCSI disk drive is installed in the base unit, and eight LVDS disk drives are installed in the Avid MediaDock LVD. The system disk drive is formatted with three partitions for storing operating system files, project files, and audio files. The Avid MediaDock LVD drives are formatted as a striped volume for video file storage.

Disk striping is a hardware capability that speeds up data I/O from disk storage. The workstation divides the data into pieces, and spreads the pieces across the disks in the striped volume. Because the workstation transfers data to multiple drives in smaller chunks than would be transferred to a single drive, the data transfer rate is accelerated. The Adaptec 39160 adapter handles data I/O for the video storage drives.

The following table summarizes disk drive information for a standard configuration:

Drive	Label	Description	Contents	Format
C:	System	A partition of the primary system disk	Operating system software	NT File System (NTFS)
D:	Video storage	• 8 disk drives striped (HD systems) • 4 disk drives striped (standard definition versions of Avid|DS with Avid MediaDock LVD storage) • 8 disk drives striped (standard definition versions of Avid|DS with Fibre Channel storage)	Video files	NTFS
F:	Projects	A partition of the primary system disk	Audio and project-related files	NTFS
Z:	DVD-ROM	-	-	-

System Inputs and Outputs

The following table describes the system inputs and outputs:

Input/output	Description
Video In	HD and SD via BNC connector
Video Out	HD and SD via BNC connector Composite via BNC connector S-video via S-video connectors
Optical Digital Input	ADAT and S/PDIF multichannel optical digital interface (ODI)
Optical Digital Output	ADAT and S/PDIF multichannel optical digital interface (ODI)
USB	Provides a communications link between the workstation and the Avid Equinox Break-Out-Box
Genlock Input	BNC connector for sync input
Sync	Provides a Genlock loop to the Avid Equinox PCI card BNC input. The sync output must be terminated if house sync is split between the Genlock Input and the Avid Equinox PCI card.
RS-232 Remote	DB-9 connector that connects the RS-232 to RS-422 convertor. Use the supplied cable only.
Adaptec 39160	VHDCI connectors for the Avid MediaDock LVD storage system
MIDI out	15-pin game port that enables MIDI control of the JLCooper MCS-3800 external controller

The MIDI/game port (located on the USB-to-MIDI converter) provides MIDI control of external controllers, such as the JLCooper MCS-3800. MIDI control requires a separately purchased breakout cable and the proper MIDI driver.

For instructions on connecting peripherals and various video equipment to your workstation, see *Assembling the System* on page 39.

Avoid using adapters as they may cause signal degradation. If you must use them, use only high-quality, tight-fitting adapters.

Signal Flow

The following provides an overview of the signal flow during capture and playback. The Avid|DS software controls the process.

Capture

Capture mode lets you use Avid|DS to capture or play back video and audio from the VTR.

- The video output of the VTR goes through the Avid Equinox Break-Out-Box to the Avid Equinox PCI card, and from there to the video storage array.
- The audio output of the VTR goes through the DUA II convertor to the Mykerinos audio card, and is stored on the audio storage area.
- The video output of the Avid Equinox PCI card goes to the Wildcat card and then to the workstation monitors, where it is displayed as video-in-a-window.
- The control signal from the COM 1 port goes to the VTR to control device operation (the supplied RS-232/RS-422 convertor and cable must be connected to the workstation).
- The sync signal from the house sync goes through the Avid Equinox Break-Out-Box to the Avid Equinox PCI card, and then internally to the Mykerinos audio card.

Playback

Playback mode lets you to use Avid|DS to record video on the VTR.

- The video stored on the video storage array goes through the Avid Equinox PCI card to the Avid Equinox Break-Out-Box, and then goes to the VTR and video monitor.
- The audio stored on the audio disk goes to the Mykerinos audio card, through the DUA II convertor, and then to the VTR.
- The video output of the Avid Equinox PCI card goes to the Wildcat card and then to the workstation monitors, where it displays as video-in-a-window.
- The control signal from the COM 1 port goes to the VTR to control device operation.
- The sync signal from the house sync goes through the Avid Equinox Break-Out-Box to the Avid Equinox PCI card, and then internally to the Mykerinos audio card.

House Sync

Whenever you use more than one video device, you must have video synchronization. If the devices are not in sync, a monitor will show rolling, tearing, or incorrect colors in the picture whenever you transfer the video between devices.

A sync generator or house sync provides the synchronizing composite signal to all other devices (video and audio) that must lock to the main video program. This analog composite reference video signal, called “color black” or “black-burst” video, is a timing pulse that is added to a composite video signal and contains horizontal, vertical, and color synchronizing information.

Tri-level Sync

In the case of HD video devices, you need a tri-level sync. Tri-level sync could be considered synonymous to black-burst in that it is simply the reference synchronizing information from the facility's master generator.

Each HD format needs a specific tri-level sync. You must use the proper tri-level sync to synchronize your VTR and the Equinox video subsystem for all the HD formats supported by Avid|DS.

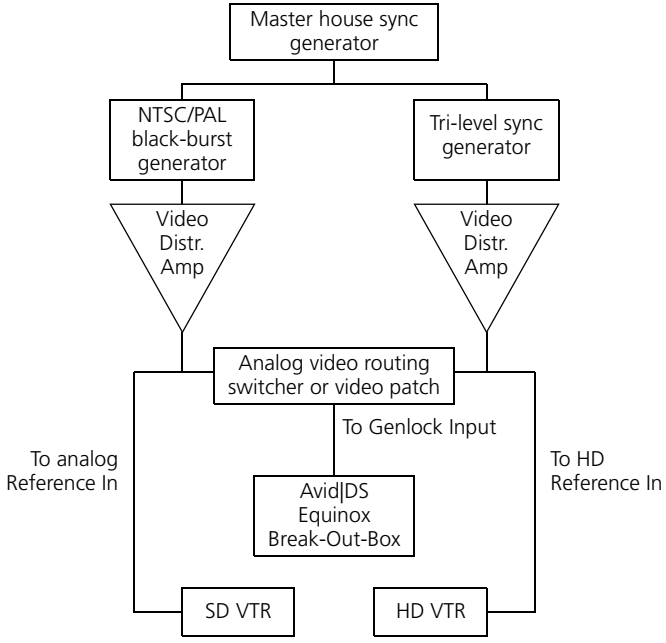
You should read the documentation that ships with your video subsystem to make sure the configuration you are using is properly synced.

These are the HD formats currently supported by Avid|DS and their relevant frame rates.

HD format	Supported frame rates (fps)
1080i Interlaced	30.00 fps, 29.97 fps, 25.00 fps
1080Psf Progressive	30.00 fps, 29.97 fps, 25.00 fps, 24.00 fps, 23.976 fps
720 Progressive	59.94 fps, 60 fps

Sync Topology

When syncing analog and digital video/audio devices, it is always preferable to feed every component with a separate black-burst or tri-level sync signal in a star pattern. Some drifting or jittering problems can be caused by the video reference being looped from one machine to another.



A typical star pattern sync topology

You also need to verify the following to make sure your topology is correct:

- **Quality of the Distribution Amp (DA)**: If your DA feeds multiple machines that are far apart, the stability and strength of the signal it sends will be crucial.
- **Distance between devices**: A good DA in a star pattern topology will be necessary to ensure that every device is properly referenced.
- **Video converters**: Some converters won't need to be fed a sync signal, as they will reference themselves on the incoming digital video signal from a device that will itself sync on a central color black sync signal. This is possible because digital video is much steadier than its analog counterpart, and the converter will always see the right frame size when converting the signal.
- **Routing switchers**: Since the Equinox Break-Out-Box only has one Ref In you may want to consider using an analog routing switcher to select between tri-level and black-burst sync signals.

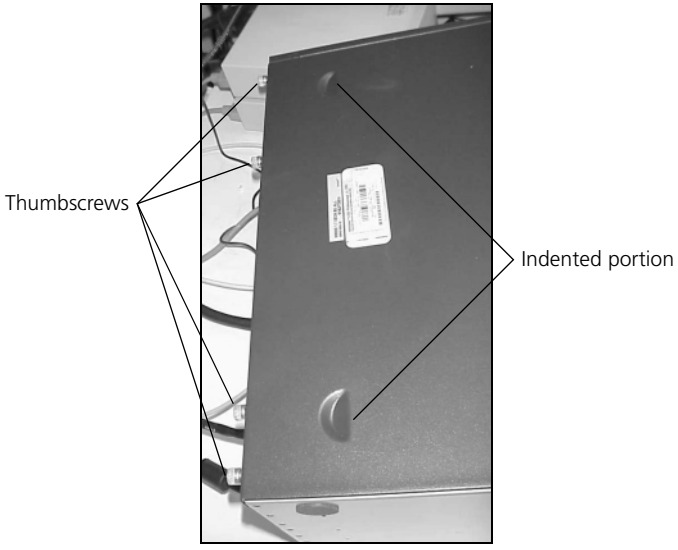
Removing and Installing the Fan

An extra fan must be installed in the Compaq W8000 system to maintain the proper cooling of the Avid|DS board set.

Before you start to remove or install the fan, make sure the system has been turned off properly, and the power cord is removed from the rear of the system.

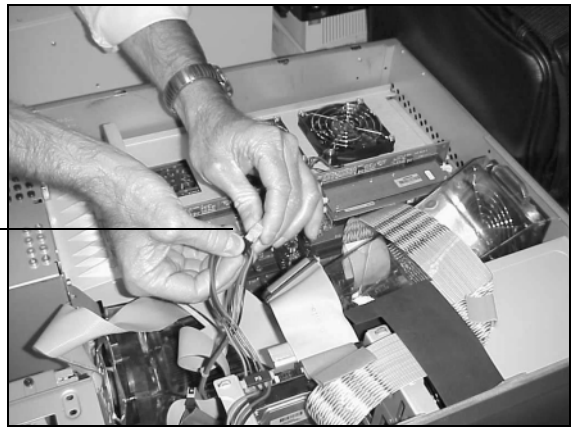
To remove the fan

1. Lay the system on its right side.
2. Loosen the four thumbscrews (they do not come off).
3. Using the indented portion of the side cover, slide the side cover toward the rear of the system.



4. Lift the side cover from the system.
5. Unplug the fan.

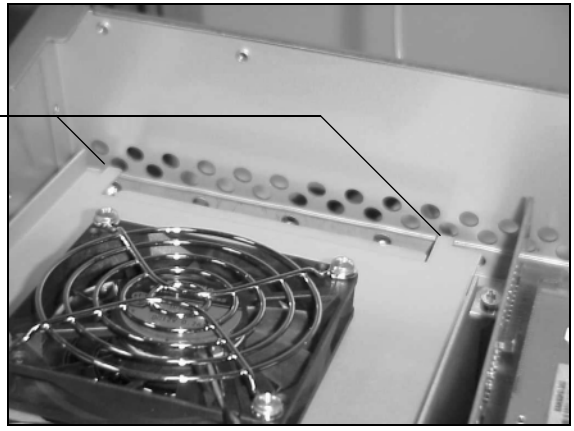
The fan uses one of the power connectors available for internal disk drives.



6. Lift the fan from the system.

To install the fan

1. Place the two fan tabs, located at the rear of the fan, into the lowest holes of the rear airflow grate.



2. Gently lower the fan portion onto the board set.
3. Plug the power connector into one of the available internal disk drive power connectors in the system.
4. Replace the side cover.

The side cover is the support for the fan. If you install the fan and attempt to stand the system up without the side cover on, the fan will fall out.

Chapter 4 Assembling the System

In This Chapter...

This chapter gives you detailed instructions for connecting an Avid|DS workstation base unit to the peripheral devices.

Before Assembling the System 41
The Keyboard, Mouse, and Graphic Tablet 42
The Computer Monitors 43
The Avid Equinox Break-Out-Box 44
The Avid MediaDock LVD 47
Avid Unity MediaNetwork 52
The Machine Control Cable 53
The USB-to-MIDI Converter 54
The Peripheral Devices 55
The Software Protection Key 59

Before Assembling the System

Before setting up your system, consult the Read Me First document or Release Notes to make sure that there are no changes, additions, or deletions to the procedures in this chapter.

The required expansion cards are installed and configured for Avid|DS. You should not remove or modify these cards.

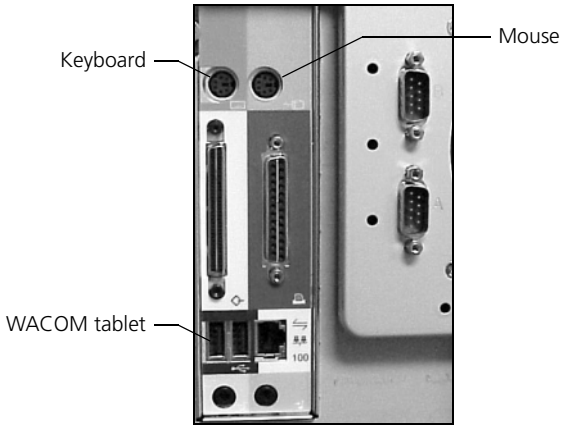
For detailed instructions on setting up the base unit hardware, refer to the setup sheet provided with the Compaq W8000 system. For a rack mount workstation, you must install the base unit into a standard rack before connecting the hardware.

To prevent equipment damage that may be caused by static electricity, do all of the following before making any connections:

- Turn the power switch off on all the devices.
- Wear an antistatic wrist strap.
- Connect all the devices to a grounded power source.
- Touch the metal casing of the device.

The Keyboard, Mouse, and Graphic Tablet

The keyboard and mouse come with attached cables for connecting them to the back panel of your workstation. The WACOM graphic tablet comes with a USB cable. The following illustration shows the keyboard, mouse, and WACOM tablet connections on a deskside workstation. For more information, refer to the WACOM documentation.



To connect the keyboard and mouse

1. In the base unit, connect the keyboard to the top-left or bottom mini-DIN port.
2. Connect the mouse to the top-right or top mini-DIN port in the base unit.

To connect the WACOM tablet

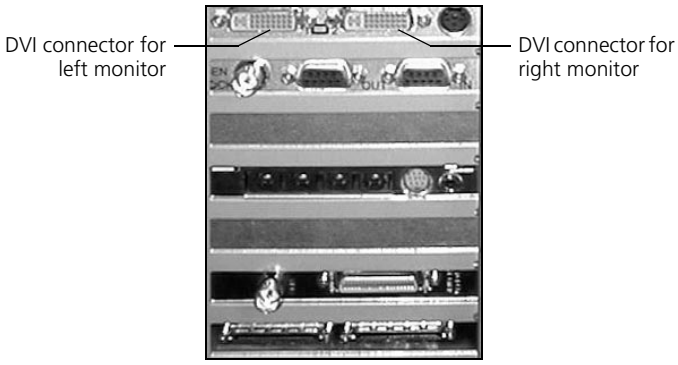
- Connect the USB cable from the WACOM tablet to the USB port on the back panel of the base unit (the tablet receives power through the USB port).

The WACOM tablet can also plug into one of the front USB ports on the workstation.

The Computer Monitors

Your workstation comes with two monitors for Avid|DS. Place the monitors side-by-side in your work area. Each monitor comes with a video cable and a power cable. You also need a a VGA-to-DVI adapter (provided) for each video cable. For more information on the card and cables, refer to the Wildcat 6210 and monitor documentation.

On a rack mount workstation, the video ports are to the left when viewing the back of the workstation base unit.



To connect the monitors

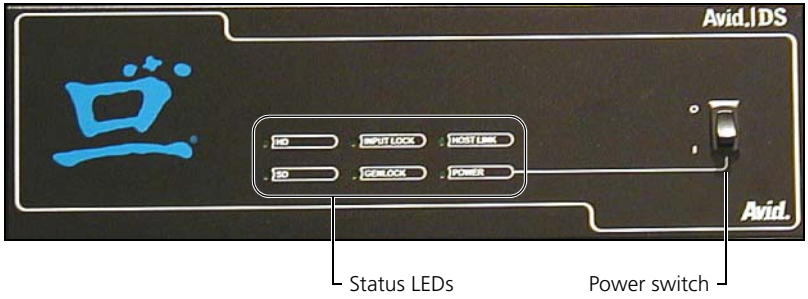
1. Verify that the power switches on the monitor(s) and the base unit are in the Off position, and then connect these devices to a power source.
2. Attach the VGA-to-DVI adapter to the monitor end of each video cable.
3. Attach each video cable to the appropriate DVI connector as per the illustration above.

Only the DVI connectors of the Wildcat 6210 are used in Avid|DS.

The Avid Equinox Break-Out-Box

The Avid|DS workstation also includes the Avid Equinox Break-Out-Box, which provides the high definition and standard definition input and output from your workstation. The front panel of the break-out-box has several status LEDs and a power switch. The status LEDs are as follows:

LED	Status
HD	The break-out-box is in HD mode (as opposed to SD).
SD	The break-out-box is in standard definition mode.
Input Lock	The break-out-box has a valid input signal and is locked to it (for capture).
Genlock	The break-out-box is locked to the house sync. This LED blinks if it detects a sync signal that is not valid.
Host Link	When Avid|DS is running, this LED blinks to indicate that there is communication between the workstation and the break-out-box. Otherwise, it glows steadily. If this LED is off, it indicates that your USB cable may be disconnected or the USB driver is disabled on your Avid|DS workstation.
Power	This LED indicates whether the break-out-box is on or off.



Front panel of the Avid Equinox Break-Out-Box

The back panel of the break-out-box has several connectors that provide the following:

- USB connection
- Digital tether that transfers video signal data between the workstation's Avid Equinox PCI card and the break-out-box
- Sync output to the Avid Equinox PCI card
- HD video input from a VTR or other device (labeled as 292M)
- HD video outputs to VTRs or monitors

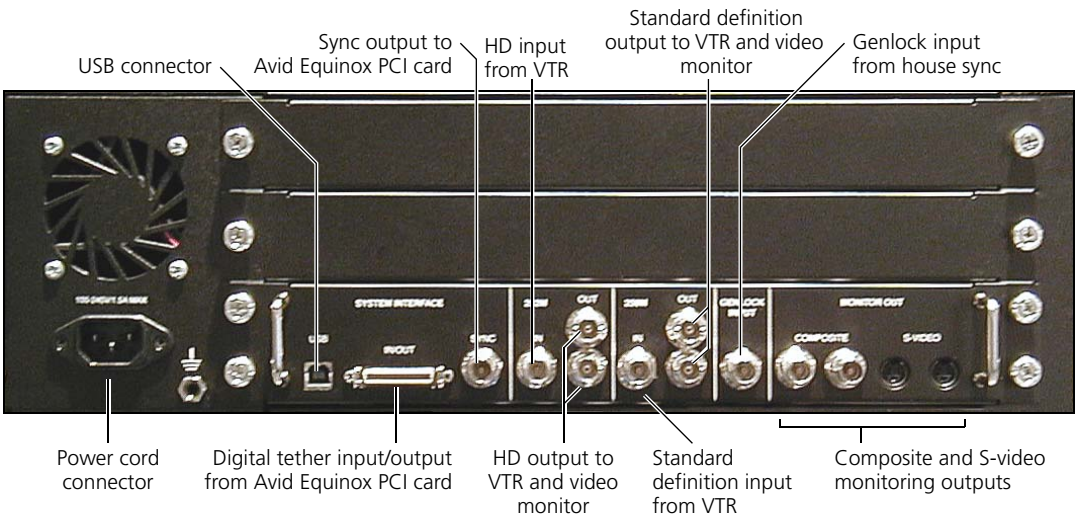
If either of the HD video outputs is not being used, terminate it with a 75-ohm terminating resistor.

- Standard definition video input from a VTR or other device (Labeled as 256M)
- Standard definition video outputs to VTRs or monitors

If either of the standard definition video outputs is not being used, terminate it with a 75-ohm terminating resistor.

- Genlock input for the incoming house sync signal
- Monitoring outputs for composite and S-video monitors

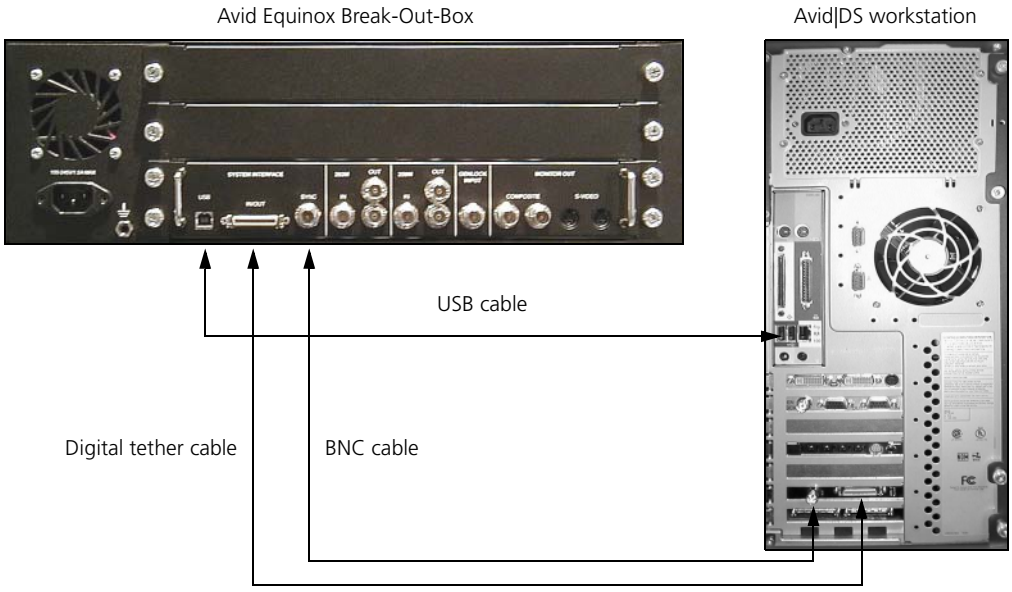
You can only monitor the composite and S-video signals during standard definition sessions.



Back panel of the Avid Equinox Break-Out-Box

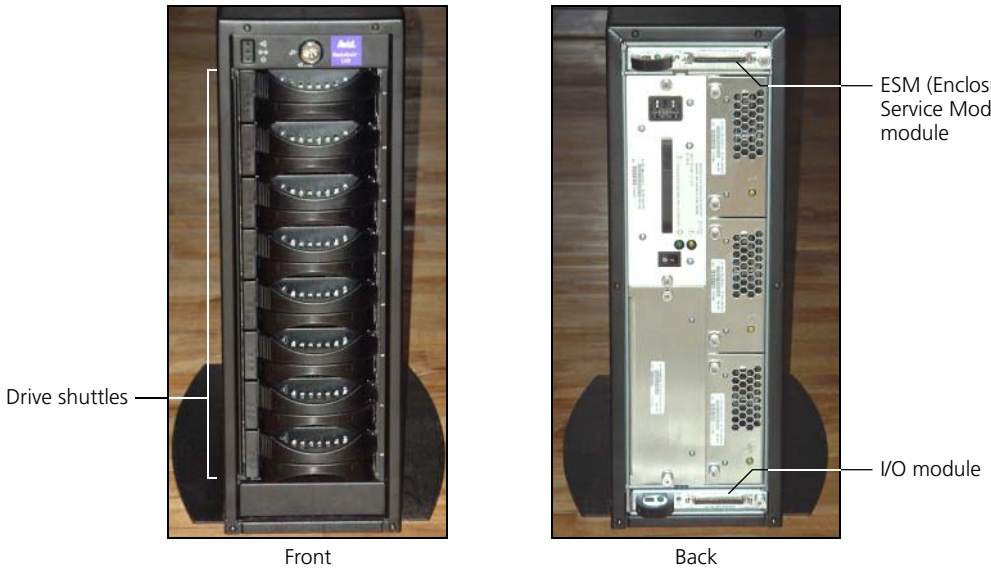
To connect the Avid Equinox Break-Out-Box to the workstation

1. Make sure that the power switch on the break-out-box is in the Off position.
2. Attach the power cord to the power connector at the back of the break-out-box and plug it into a power outlet.
3. Locate the USB cable in the break-out-box kit.
4. Plug one end of the cable into the USB connector on the back of the break-out-box.
5. Plug the other end of the cable into the USB connector on the back of the workstation.
6. Plug one end of the digital tether cable into the In/Out connector at the back of the break-out-box.
7. Plug the other end of the digital tether cable into the Digital tether connector on the Avid Equinox PCI card.
8. Secure both ends of the cable with the thumbscrews on the cable connectors.
9. Attach one end of the BNC cable to the Sync output connector on the break-out-box and the other end to the Reference signal in connector on the Avid Equinox PCI card.



The Avid MediaDock LVD

The Avid MediaDock LVD is the default storage system that comes with Avid|DS. You can connect the Avid MediaDock LVD storage system directly to the Adaptec controller in the Avid|DS workstation with the SCSI cables (included). The controller is installed before your Avid|DS workstation is shipped.



The Avid MediaDock LVD storage system

The Avid MediaDock LVD has eight slots for LVD shuttle drives. You can use them in either single or dual-bus configurations. With Avid|DS, however, the Avid MediaDock LVD is used in a dual-bus configuration. In this configuration, the slots are shared between bus A and bus B. For example, the four top slots on bus A and the four bottom slots on bus B.

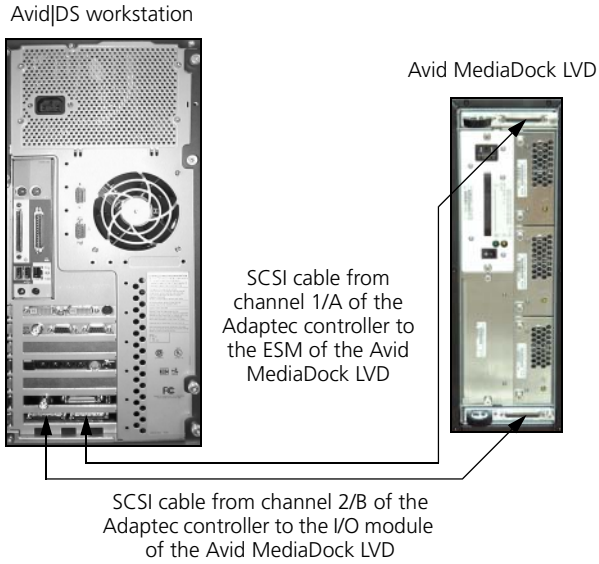
If you need extra storage, you can connect two Avid MediaDock LVD enclosures to your Avid|DS workstation.

Do *not* use the Avid MediaDock LVD Manager software that comes with the MediaDock. This utility is not supported on the Windows 2000 operating system at the present time and may cause problems with other applications.

Make sure that you do *not* terminate the I/O modules with SCSI terminators. The I/O and ESM modules have internal termination.

Single-Enclosure Configuration

The single-enclosure configuration is the simplest of the three supported storage configurations. The single Avid MediaDock LVD is attached to the Avid|DS workstation in a dual bus configuration as shown below.



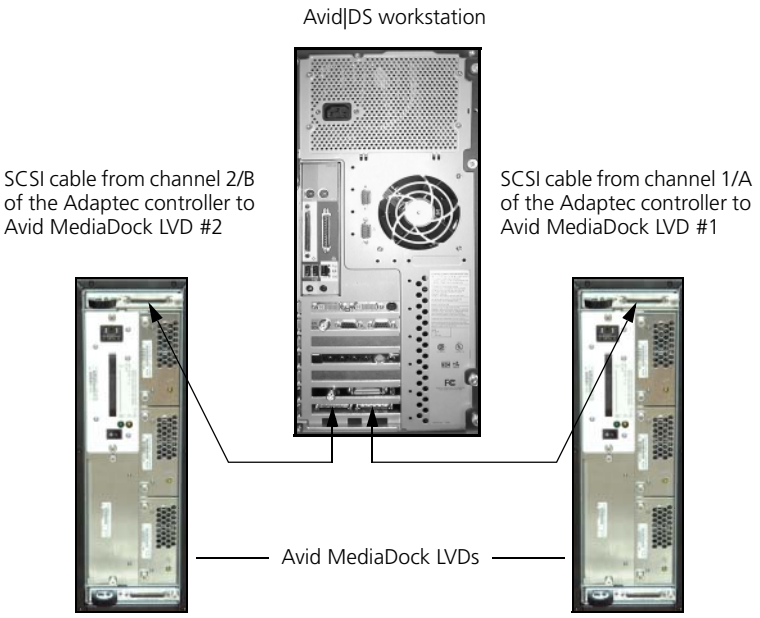
To connect the Avid MediaDock LVD in a single-enclosure configuration

1. Locate one of the SCSI cables in the Avid MediaDock LVD kit. It has a very-high-density SCSI connector on one end and a high-density 68-pin connector on the other end.
2. Attach the very-high-density connector of the cable to the channel 1/A connector of the Adaptec controller.
3. Attach the cable's other high-density 68-pin connector to the corresponding connector in the ESM module at the top rear of the Avid MediaDock LVD.
4. Locate the second SCSI cable; it is identical to the first.
5. Attach the very-high-density connector of the cable to the channel 2/B connector of the Adaptec controller.
6. Attach the cable's other high-density 68-pin connector to the corresponding connector in the I/O module at the bottom rear of the Avid MediaDock LVD.

   In this configuration, the drives in the Avid MediaDock LVD are shared between the two SCSI buses.

Two-Enclosure Configuration

The two-enclosure configuration uses two MediaDock LVDs, each in a single bus configuration (each enclosure connected to a single SCSI bus) as shown below. In this configuration, you can use a maximum of sixteen drives, eight in each MediaDock or on each SCSI bus.

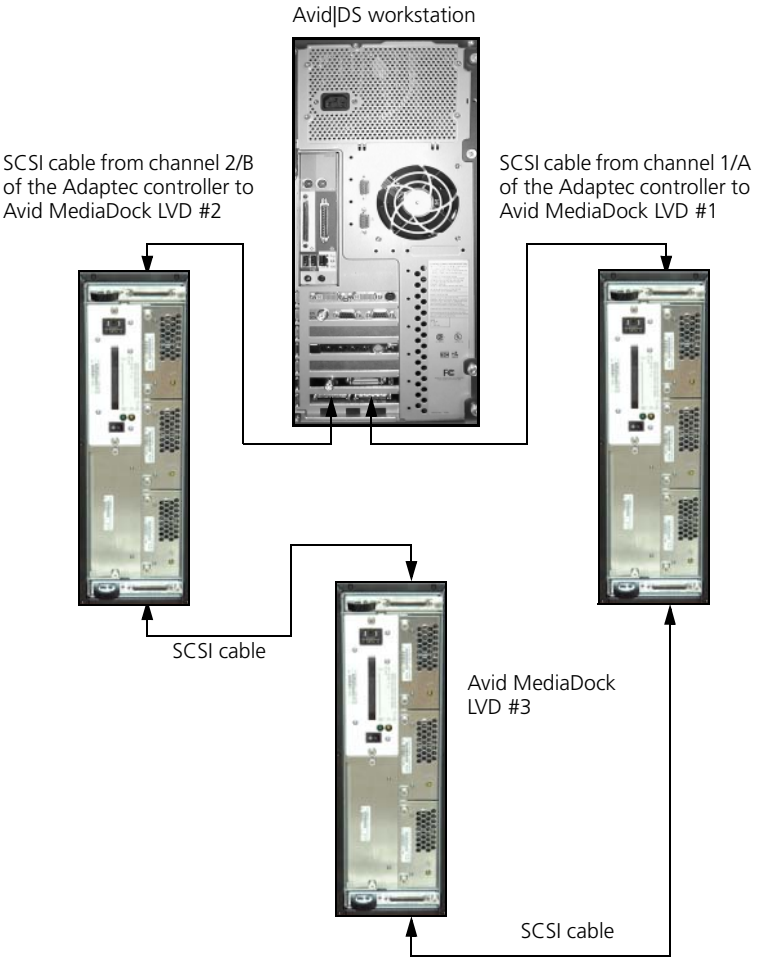


To connect the Avid MediaDock LVD in a two-enclosure configuration

1. Locate one of the SCSI cables in the Avid MediaDock LVD kit.
2. Attach the very-high-density connector of the cable to the channel 1/A connector of the Adaptec controller.
3. Attach the cable's other high-density 68-pin connector to the corresponding connector in the ESM module at the top rear of Avid MediaDock LVD #1.
4. Locate the second SCSI cable; it is identical to the first.
5. Attach the very-high-density connector of the cable to the channel 2/B connector of the Adaptec controller.
6. Attach the cable's other high-density 68-pin connector to the corresponding connector in the ESM module at the top rear of Avid MediaDock LVD #2.
7. On both Avid MediaDock LVD #1 and #2, place the configuration switches on the ESM and I/O modules into position 1.

Three-Enclosure Configuration

The three-enclosure configuration uses two Avid MediaDock LVDs in single bus configurations and one Avid MediaDock LVD in a dual bus configuration. This configuration lets you use a maximum of twenty-four drives; twelve on each SCSI bus.



Before assembling this storage configuration, you must replace the ESM on Avid MediaDock LVD #1 and #2 with an SRM (SCSI Repeater module). Contact your Avid|DS reseller to obtain the necessary replacement module.

To connect the Avid MediaDock LVD in a three-enclosure configuration

1. Locate one of the SCSI cables in the Avid MediaDock LVD kit.
2. Attach the very-high-density connector of the cable to the channel 1/A connector of the Adaptec controller.
3. Attach the cable's other high-density 68-pin connector to the corresponding connector in the SRM module at the top rear of Avid MediaDock LVD #1.
4. Locate the second SCSI cable; it is identical to the first.
5. Attach the very-high-density connector of the cable to the channel 2/B connector of the Adaptec controller.
6. Attach the cable's other high-density 68-pin connector to the corresponding connector in the SRM module at the top rear of Avid MediaDock LVD #2.
7. Locate another SCSI cable that has high density 68-pin connectors at both ends.
8. Attach one end of the cable to the connector on the I/O module at the bottom rear of Avid MediaDock LVD #1.
9. Attach the other end of the cable to the I/O module at the bottom rear of Avid MediaDock LVD #3.
10. Locate another SCSI cable that has high density 68-pin connectors at both ends.
11. Attach one end of the cable to the connector on the I/O module at the bottom rear of Avid MediaDock LVD #2.
12. Attach the other end of the cable to the ESM module at the top rear of Avid MediaDock LVD #3.
13. On Avid MediaDock LVD #1 and #2, place the configuration switches on the SRM and I/O modules into position 2.
14. On Avid MediaDock LVD #3:
    - Place the configuration switch on the ESM module in position 1.
    - Place the configuration switch on the I/O module in position 2.

Avid Unity MediaNetwork

Avid Unity MediaNetwork is the facility-class media network for content creators that lets you share a single storage between multiple workstations. You need to have an ATTO optical fibre channel controller installed in your Avid|DS workstation to connect to MediaNetwork. The ATTO optical fibre channel controller is available as an option when you purchase Avid|DS. Contact your Avid|DS reseller for more information on using Avid|DS with MediaNetwork.

The ATTO card is supported with Avid Unity MediaNetwork v3.0 or later.

Installing the ATTO Optical Fibre Channel Controller

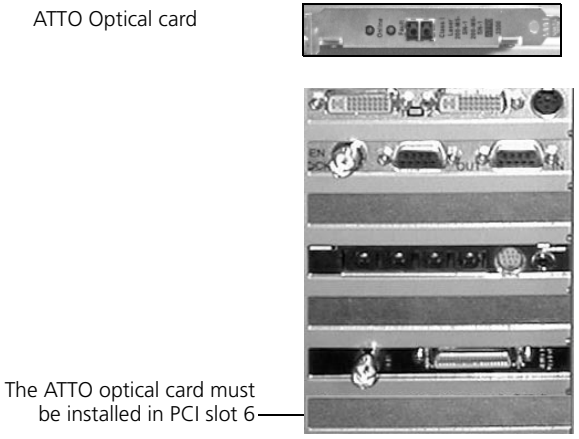
Before you can use Avid|DS with MediaNetwork, you must install the ATTO card and relevant drivers in your Avid|DS workstation.

To install the ATTO optical Fibre Channel controller and drivers

1. Shut down your workstation and open the cover—refer to the Compaq W8000 user's guide.

   A Compaq W8000 user's guide can be found in PDF format on the Workstation Reference Library CD that ships with the Compaq W8000 system.

2. Install the ATTO optical card in PCI slot 6 of your workstation.



3. Restart your workstation.

   Windows 2000 will detect the presence of the ATTO optical card.

4. Follow the instructions in the MediaNetwork installation instructions to complete the driver installation.

Once this is complete, refer to the Avid Unity MediaNetwork Windows Client Setup Guide for more information.

The Machine Control Cable

The machine control cable that is included with Avid|DS consists of the DataMate DM 7015 or Rosetta Stone adapter, a 3-foot RS-232 cable, and a 10-foot RS-422 cable. The adapters perform an RS-232 to RS-422 signal conversion that lets you control a VTR from your Avid|DS workstation. The two cables are both standard 9-pin male-to-male data cables.

The adapters includes two diagnostic LEDs (power and data). The power LED glows steadily when the adapter is receiving adequate power through the serial port. The data LED flashes whenever data is being transmitted or received. This helps you confirm that the serial port is active.

To assemble the machine control cable

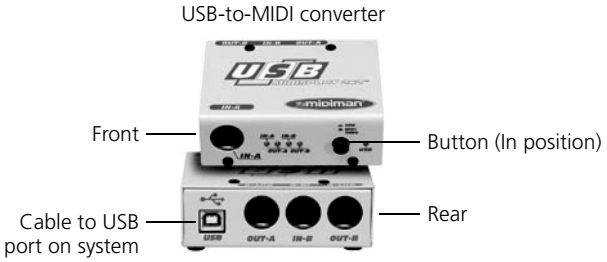
1. Attach the RS-232 cable to the RS-232 from PC end of the adapter.
2. Attach the RS-422 cable to the RS-422 to VTR end of the adapter.

The adapter label shows the correct orientation.

The USB-to-MIDI Converter

You can install a USB-to-MIDI converter if you are using a JL Cooper controller in a Compaq W8000 system. The MIDISPORT 2x2 by MIDIMAN has been tested with the Avid|DS system. You need a USB cable that connects to a USB port on the Avid|DS system. Only connect the USB-to-MIDI converter if you are going to use it.

To use the USB-to-MIDI converter, you must install the proper revision driver prior to use. Go to www.midiman.net and install the latest revision for the MIDISPORT 2x2.



To connect the USB-to-MIDI converter to a port on the system

1. Locate the MIDI converter USB cable.
2. Connect the device connector of the USB cable to the device connector at the rear of the USB-to-MIDI converter.
3. Connect the USB connector of the USB cable to a USB port at the rear of the PC.
4. Press the USB/MIDI Thru button *In,* at the front of the USB-to-MIDI converter, to allow the device to act as a USB-to-MIDI converter.

The Peripheral Devices

Peripheral devices, such as VTRs and DATs, connected to your workstation allow you to capture and output video/audio material. You can control this equipment remotely with Avid|DS.

Video Connections

You can connect HD VTRs and video monitors to your workstation. Although you should use a house sync, Avid|DS can capture and output using an internal sync signal generated by the Avid Equinox Break-Out-Box.

The following procedures and illustrations explain each of these variations. For more information, refer to the documentation that comes with your peripheral devices.

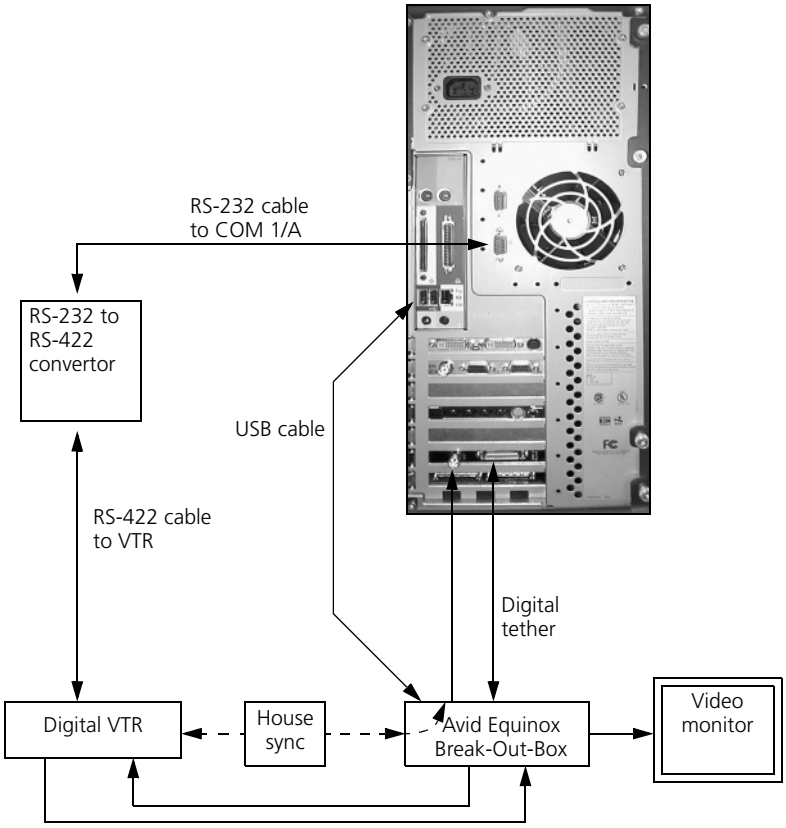
On a rack mount workstation, the input/output panel (which contains the COM 1 serial ports) is to the left of the expansion card slots when viewing the back of the workstation base unit.

To connect video devices

1. Connect the HD In, on the Avid Equinox Break-Out-Box, to the HD Out on the VTR.
2. Connect one of the HD Outs, on the Avid Equinox Break-Out-Box, to the HD In on the VTR.
3. Connect the other HD Out, on the Avid Equinox Break-Out-Box, to the HD In on the video monitor.
4. Set the VTR transport switch to Remote.
5. Plug the RS-232 end of your machine control cable into the COM 1 port on your workstation.
6. Plug the other end of the cable to the REMOTE IN port on the VTR.

You should not substitute the machine control cable with any other cable. The supplied machine control cable is an RS-232 to RS-422 converter.

7. Plug one end of a BNC sync cable into the Avid Equinox Break-Out-Box's Genlock Input and the other into the house sync.



Using Internal Sync

Using internal sync lets you capture and play back video without the benefit of having a house sync signal. During capture, the Avid Equinox Break-Out-Box takes its sync signal from the SDI video signal. During output to tape, the VTR also accepts the sync signal from the SDI video signal.

To use internal sync for capture and playback

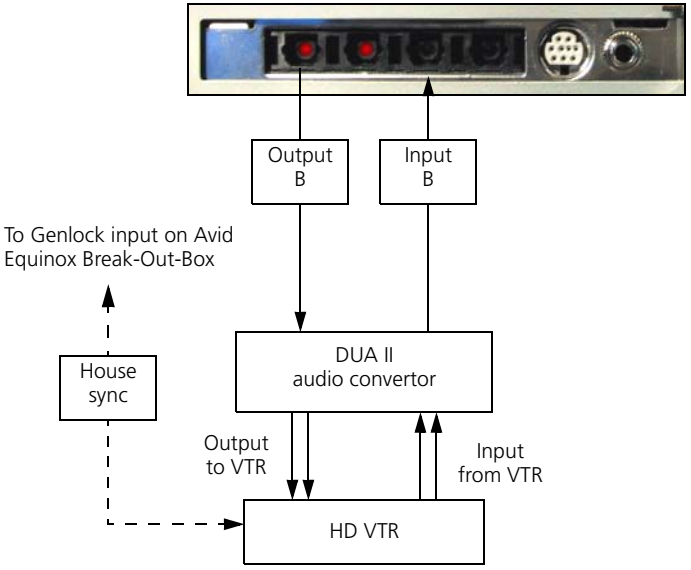
1. Remove the connection between the house sync and your VTR, as well as the connection between the house sync and Avid Equinox Break-Out-Box.

Do *not* loop the Sync Output from the Equinox Break-Out-Box to the VTR.

2. If your VTR has a Servo Reference option, set it to **Automatic**.

Audio Connections

The connections between the Mykerinos audio card, DUA II audio convertor, and VTR may vary depending on the type of audio equipment and VTR you have. Use the following illustration and steps as a guideline for connecting the Mykerinos audio card and audio equipment.



For information on specific port configurations, refer to the documentation that comes with your DUA II audio convertor, VTR, and Mykerinos audio card. For a description of the Mykerinos audio card connections, see *Mykerinos Audio Card Connections* on page 29.

To connect your audio equipment

1. Make sure that the power switch on the DUA II is in the Off position.
2. Attach the power cord to the power connector at the back of the DUA II, and plug it into a power outlet.
3. Connect the Optical Output B to ODI In on the DUA II audio convertor.
4. Connect the Optical Input B to ODI Out on the DUA II audio convertor.
5. Connect the audio output ports on the audio convertor to the input ports on the VTR or audio device.
6. Connect the audio input ports on the audio convertor to the output ports on the VTR or audio device.

There is no external sync connection to the Mykerinos card as the sync signal is provided by the Avid Equinox PCI card via an internal connection.

DUA II Configuration

Connecting the optical cables from the DUA II to Input B and Output B allows the DUA II to get a sync signal directly from the Mykerinos card. Input A and Output A on the Mykerinos card are S/PDIF only and do not support a sync signal.

The DUA II has eight DIP switches which are located along the right side of the DUA II unit. For the DUA II to work properly with Avid|DS, these DIP switches must be configured as follows:

- Switches 1 to 4 must be ON (down)
- Switches 5 to 8 must be OFF (up)

On the front panel of the DUA II, you must also have the following settings:

- **Synchronization (ODI)**: Allows the DUA II to detect a sync signal from the Mykerinos card via the optical cables.
- **Sample rate (Auto Detect)**: Press and hold the red sample rate button for approximately one second to enable automatic sample rate detection of the audio format. Once the DUA II has detected and locked to the sample rate of the sync signal, the LED indicating the sample rate turns green.

For more information on configuring your DUA II, refer to the vendor documentation.

The Software Protection Key

The software protection key (dongle) provides copy protection for the software that is installed on your workstation. Avid|DS will not start unless the dongle identification number matches the information in the license file on your workstation's hard drive.

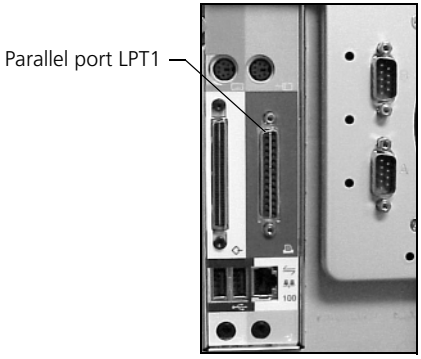
The dongle does not require batteries as it receives electrical power from the parallel port. So, before attaching the dongle, you should verify that the parallel port is active.

Your workstation is delivered with a license file already on the hard drive. This license file was used for testing prior to shipment. Your Avid|DS reseller will provide a valid license file for your dongle. For more information, refer to *Licensing Avid|DS and Avid|DS RP* on page 103.

On a rack mount workstation, the input/output panel (which contains the parallel LPT1 port) is to the left when viewing the back of the workstation base unit.

To install the software protection key

1. Attach the dongle to the parallel (LPT1) port on the back of the workstation.
2. Start the workstation and log on as an **Administrator**.
3. Right-click on My Computer and choose **Device Manager**.
4. Select **Ports (COM & LPT)** and select **ECP Printer Port (LPT1)**.
5. Right-click on ECP Printer Port (LPT1) and choose **Properties**.
6. Click the General tab and verify that the Device Status says "**This device is working properly**".
7. If not, close the dialog box, right-click on ECP Printer Port (LPT1) and choose **Enable**.



Chapter 5 Upgrading Your Workstation

In This Chapter...

This chapter explains how to upgrade your Avid|DS software on either the IBM 6866 Z Pro or the Compaq EVO W8000 to Avid|DS 6.

Preparing to Upgrade 63
Installing the System BIOS and Drivers 65
Installing the Avid Drivers 68
Installing Drivers for Compaq W8000 Systems 75
Uninstalling Avid|DS 79

Preparing to Upgrade

If you are upgrading your Avid|DS system to version 6.0 or later, and you have one of the following systems, you must install drivers or firmware **before** installing Avid|DS.

- An IBM 6866 system using Avid|DS 4.01, 4.02, or 5.0
- A Compaq EVO W8000 system using Avid|DS 5.01

If you purchased a new Avid|DS system, the drivers and firmware needed to run Avid|DS are already installed on the system disk. However, you must install version 6.x of the Avid|DS software—go directly to *Installing Avid|DS* on page 81.

The following checklist indicates what you need to do to prepare your system for the upgrade. It applies to both the IBM and Compaq systems:

1	Read the Avid|DS Release Notes that came with your system or software upgrade package to see if there are any changes to this document.
2	Archive your existing projects and media. Avid|DS 6 uses a different media format than previous releases. Therefore, you **must archive** all your project information and media files with your current version of Avid|DS to tape. Note: You may also place your archived files on a CD. If you choose to do this, make sure you "zip" your files before burning them onto a CD. After you upgrade to Avid|DS 6, you can restore the archive and recapture your media—see the Avid|DS User's Guide for information on how to archive a project to tape.
3	Uninstall your current version of Avid|DS—see *Uninstalling Avid|DS* on page 79.
4	Check all third-party plug-ins for compatibility with Avid|DS 6. Avid|DS 6 only supports AVX 1.0 plug-ins. You will need to update any plug-ins from 5D, The Foundry, and Primatte. Contact the vendor directly for details. All other AVX-based plug-ins do not need to be updated. Note: Avid also supports VST audio plug-ins. For details contact Customer Services.

Although not recommended, you could use one of the two Recovery CDs that are included with the workstation to automatically install the operating system and the drivers for Avid|DS 6 on your system disk. For more information, see *Installing the Recovery CD* on page 159.

Be aware that using the Recovery CD destroys all information on your C: partition (and, if selected, the F: partition on a Compaq), including any third party software, personal information, and registry information. Also, you will still need to install certain firmware if you use the Recovery CD for the upgrade.

Drivers to Install

The drivers that you need to install for the upgrade to version 6 depend on the workstation you're using. Upgrade your system BIOS and just the specific drivers needed by Avid|DS 6.x.

Driver\Firmware	Compaq EVO W8000 install required	IBM Z Pro 6866 install required	After Recovery CD install required
System BIOS	Possibly	Possibly	Possibly
Equinox Subsystem Firmware (Provolone - roqueforv15 Roquefort - provo3V70)	Yes	Yes	Yes
Avid Equinox Video Subsystem PCI V9.0.0.3 and Break-Out-Box V5.0.0.2	Yes	Yes	No
Avid Startup	No	Yes	Yes (for IBM Z Pro)
Merging Mykerinos Audio board VS3rt4sp1	Yes	Yes	No
Wildcat graphics board V05.05.03.15	Yes	Yes	Yes
SCSI controllers ADPU160M.inf file	Yes	No	No
Intel chipset V3.10.1011	Yes	No	No
Intel Pro100 Network V5.3	Yes	No	No
Logitech MouseWare V9.29	Yes	No	No
SBAudioPCI 128 V7.05c[a]	Yes	No	No

a.If you install this driver, it removes the USB Eject button from the taskbar. You will have to reinstall the USB Eject button.

Installing the System BIOS and Drivers

This section explains how to install the system BIOS for the Compaq W8000 and IBM 6866 systems and the drivers needed for each system

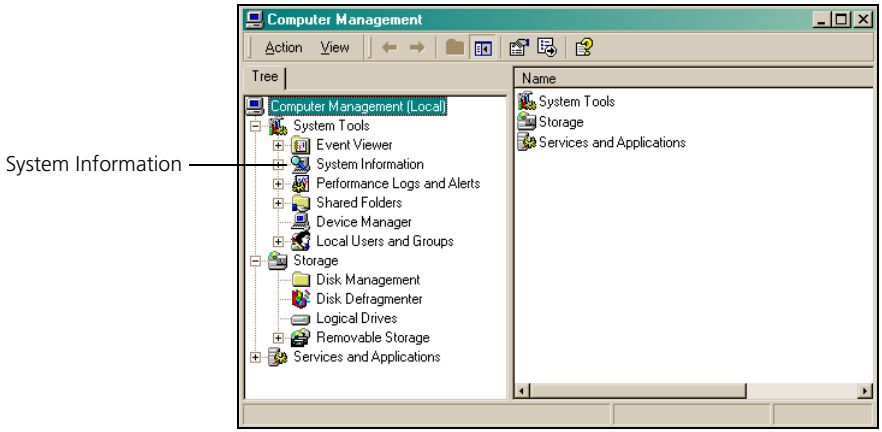
Installing the System BIOS for the Compaq W8000 System

Your system must have a minimum revision system BIOS of 1.17.

To determine the revision of the system BIOS

1. On the Windows desktop, right-click the **My Computer** icon and choose **Manage**.

   The Computer Management window is displayed.



2. Use the tree in the left view to navigate to the **System Information** > **System Summary** folder.
3. Check the BIOS version.
   - If it is 686P6 v1.17, go to *Installing the Avid Drivers* on page 68.
   - If it is earlier than 686P6 v1.17, continue to the next step.
4. Put the Avid|DS version 6.x Drivers CD into the CD-ROM drive.

   The Main Menu is displayed.
5. Click **Browse CD**.
6. Browse to **win2000/compaq/System/bios**.
7. Put a blank, formatted diskette in the floppy drive.
8. Double-click on **Compaqbios1-17.exe** file and follow the instructions to create a diskette that contains the 1.17 system BIOS.
9. Leave the diskette in the floppy drive and restart the workstation.

During the restart, the workstation boots from the floppy drive. Follow the instructions on the screen to reprogram the system BIOS. (You may receive a message saying that there isn't enough space on the floppy to copy the file. Ignore this message and click OK to proceed.)

Do not turn off power while the workstation BIOS is being reprogrammed!

10. When complete, remove the diskette and restart the workstation.
11. Proceed to *Installing the Avid Drivers* on page 68.

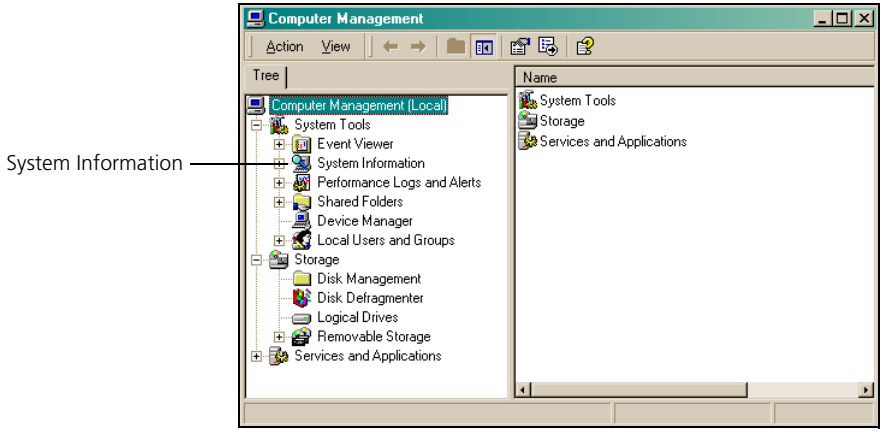
Installing the System BIOS for the IBM Z Pro 6866 System

Your IBM 6866 Z Pro system must have a minimum revision system BIOS of PFJT47A.

To determine the revision of the system BIOS

1. On the Windows desktop, right-click the **My Computer** icon and choose **Manage**.

   The Computer Management window is displayed.



2. Use the tree in the left view to navigate to **System Information** > **System Summary** folder.
3. Check the BIOS version.
   - If it is revision PFJT47A, or later go to *Installing the Avid Drivers* on page 68.
   - If it is earlier than version 47A, continue to the next step.

The IBM website provides detailed instructions on how to download the BIOS and install it on your system. You will need a formatted floppy diskette to download and install the system BIOS. The following procedure provides step-by-step instructions as an *example* of how you can find the BIOS on the IBM website. IBM can change their website at any time causing the following procedure to be invalid.

4. On the Internet, go to **www.ibm.com**.
5. From the menu on the IBM website, click **Support & Downloads**.
6. From Search the Technical Support Database by Category, choose **Desktop computing**.
7. From Product Family, choose **IntelliStation**.
8. From Product Type, choose **IntelliStation Z Pro**.
9. From Limit Results by Type of Support, choose **Downloadable files**.
10. From Limit Results by Download, choose **Updates**.
11. From Limit Results by Type of Updates, choose **BIOS (system)**.

    A driver for IBM Intellistation Z Pro (Type 6866) - Flash BIOS update diskette version PFJT47A will be found.
12. Double-click on this link, and follow the instructions to download and install the updated BIOS.

    When you install the BIOS, you will be asked specific questions about your system. You normally only need to specify the country you are from and answer **No** to all of the remaining questions.

Do not turn off power while the system BIOS is being reprogrammed!

13. After the BIOS upgrade, proceed to *Installing the Avid Drivers* on page 68.

Installing the Avid Drivers

Before installing Avid|DS 6.x, you must install the following Avid drivers on **your** the IBM 6866 Z Pro system or Compaq EVO W8000 system:

- Avid Equinox Firmware
- Avid Equinox Video Subsystem Drivers
- Merging Technology VS3 run-time driver
- Wildcat driver for the 6210 Wildcat graphics board. This driver is also used on the Wildcat 4210 board in the IBM 6866 Z Pro system.

Upgrading the Avid Equinox Subsystem Firmware

There are two different firmware options that you need to upgrade in the Avid Equinox Break-Out-Box:

- Provolone
- Roquefort

After installing the firmware, you must reset the Break-Out-Box and wait for the memory to be cleared.

To install the firmware

1. Put the Drivers CD into the CD-ROM drive.

   The Main Menu displays.

2. Click **Browse CD**.
3. Browse to w**in2000\Avid\equinox\firmware**.
4. Double-click on the **EquinoxUtils.exe** file.

   The Equinox Update Utility window opens with the following two drivers selected (they are grayed out and cannot be changed):

   - Provolone
   - Roquefort

5. Click the **Sirius Download** button.

Do not cancel the download or turn off the Avid Equinox Break-Out-Box or your workstation during the few minutes it takes to update the firmware.

6. When the download is complete, click **OK**.
7. Click **Cancel** to close the Equinox Update Utility window.
8. **Shut down**, not restart, the workstation.
9. Turn off the Avid Equinox Break-Out-Box and wait for a minimum of 30 seconds.

10. Turn on the Avid Equinox Break-Out-Box.

    The Avid Equinox Break-Out-Box won't be ready to use for about 2 minutes or until the self-test is complete and the lights stop blinking.

11. You can now restart the workstation.

Installing the Avid Equinox Video Subsystem Driver

You must now install the drivers needed for the Avid Equinox Break-Out-Box.

1. Put the Drivers CD into the CD-ROM drive.

   The Drivers CD Main Menu is displayed.

2. Click **Browse CD**.
3. Browse to **Win2000/Avid/equinox/drivers**.
4. Double-click on the **Setup.exe** file and follow the instructions to install the Equinox drivers.
5. When the Installation Wizard window opens, click **Next.**

   The Select Components window displays.

6. Select both the PCI and BOB drivers in the window and click **Next**.
7. Click **Yes** in the Signature Not Found dialog box.

   The Found New Hardware Wizard is displayed.

8. Click **Next** and the Install Device Driver window displays.
9. Choose **Display a list of known hardware drivers** and click **Next**.

   The Select device driver dialog box is displayed.

10. Click **Have disk** and the Install from Disk window displays.
11. Click **Browse** and the Locate File window displays.
12. Browse to **E:\win2000\Avid\equinox\drivers\Equinox PCI**.
13. Choose **Equinox_PCI.inf** and click **Open**.
14. Click **OK** in the Install From Disk window.
15. Click **Next** in the Select device driver window.
16. Click **Next** to install the driver.
17. Click **Finish**.
18. Click **Yes** in the Digital Signature Not Found dialog box.
19. Select **Yes**, restart the computer and click **Finish**.

Installing the Merging Mykerinos Driver

The existing Merging Mykerinos driver must be removed before you install the new driver. When you remove the existing software you must turn off the workstation and allow it to remain off for a minimum of 1 minute before you turn the workstation back on. This allows the Merging Mykerinos board to properly reset.

To uninstall the existing driver

1. Click the **Start** button and select **Settings** > **Control Panel**.
2. Double-click on **Add/Remove Programs**.
3. Select **VS3 RunTime** and click **Change/Remove**.
4. In the Confirm File Deletion dialog box, click **OK**.
5. When the Shared File Detected dialog box displays, select **Don't display this message again** and click **Yes**.
6. Click **No** when you are asked if you want to restart the computer.
7. Instead, click the **Start** button and choose **Shutdown**.

   You must shut down the workstation and not just restart it. The Merging Mykerinos board needs time to properly reset.

   After the workstation shuts down, wait for about 1 minute before turning the workstation back on.
8. Once you're logged on again, verify that the Merging Mykerinos software was completely removed:

   - Browse to **C:\Program Files\Common Files** and remove the **Merging Mykerinos** folder if it is there.
   - Browse to **C:\WINNT\system32\drivers** and delete the **tmman.sys** and **tmirq.sys** files if they are there.

To install the new driver

1. Put the Drivers CD in the CD-ROM drive.

   The main menu displays.
2. Click **Browse CD**.
3. Browse to the **\win2000\mkerinos\driver** folder and double-click on the **VS3rt4sp1.exe** file.
4. The Installation Shield Wizard opens, click **Next** to **install the files**.
5. Click **Yes** in the Signature Not Found dialog box.
6. Select **Yes** to restart the workstation, and click **Finish**.

Installing the Avid Startup Driver

This upgrade is only required on the IBM Z Pro system.

To install the latest Avid startup driver

1. Put the Drivers CD into the CD-ROM drive.

   The main menu displays.

2. Click **Browse CD**.

3. Browse to the **\win2000\avid\startup\driver** folder and click the **setup.exe** file.

   If prompted by your browser, select **Run** and **Yes** (IE 5.x) or **Open** (IE 6.x) instead of saving to disk.

4. Click **Next** on the Welcome dialog.

5. Click **Yes** to the License Agreement dialog.

   The Avid Startup service is installed.

6. Choose "Yes, I want to restart my computer now." and click **Finish**.

Installing the Wildcat Driver

After you install the Wildcat driver, you must configure the it.

To install the Wildcat driver

1. Put the Avid|DS Software CD into the CD-ROM drive.

   The main menu displays.

2. Click **Browse CD**.

3. Browse to the **\wildcat\driver** folder and double-click on the **Setup.exe** file.

   A 3Dlabs installer screen appears and the files are installed. When the screen disappears, the files have been installed. You now need to configure the Wildcat driver.

To configure the Wildcat driver

1. Close all windows on the desktop.

2. Right-click on the desktop and choose **Properties**.

3. Select the **Settings Tab** and the Display Properties window opens.

   You should see the numbers 1 and 2. They represent the two monitors. You will configure both of these monitors, one at a time.

4. Click the number **1**.

5. Adjust the screen area to **1280 x 1024**.

6. Select **True Color 32 bit**.

7. Click the **Advanced** button.

   The Plug and Play window is displayed.

8. Select the **Wildcat Configuration** tab.

   The Wildcat Configuration window is displayed.

9. Set the Maximum Number of Displays to **2** and click the **Configuration Wizard** button.

   The Wildcat Configuration Wizard window is displayed. Click **Next to display** the Configuration list.

10. Choose Avid|DS and click **Next**.
11. Click **Finish**.
12. Close the Plug and Play window.
13. Click **OK** in the Wildcat Configuration window.
14. Restart the workstation.

    After the workstation restarts, you must change the display settings again.

15. Right-click on the desktop and choose **Properties**.
16. Choose the **Settings Tab** and the Display Properties window opens.

    You should see the numbers 1 and 2. They represent the two monitors. You will configure both of these monitors, one at a time.

17. Click the number **1**.
18. Adjust the screen area to **1280 x 1024**.
19. Select **True Color 32 bit** and click **Apply**.
20. Click the number **2**.
21. Adjust the screen area to **1280 x 1024**.
22. Select **True Color 32 bit** and click **Apply**.
23. Click **OK** to the Display Property message.
24. Click **Yes** to the Monitor Settings.
25. Click **OK** to exit the Display Properties.

After you restart the workstation, check that both monitors are set to 1280x11024, colors are 32bits, and the refresh rates are 75Mhz (or higher if your monitors supports it).

Installing the SCSI Drivers

Your Compaq W8000 system contains two SCSI controllers, one on the PCI board and one on the system board of the Compaq W8000. Each controller has two channels, both needing a separate driver.

This driver does not need to be installed on an IBM 6866 Z pro system.

These instructions explain how to create a diskette with the needed driver from the Drivers CD. You will use that diskette to install the driver to the first SCSI channel. During the first SCSI driver installation, the system places the new driver in the C:\WINNT\inf folder. You will use that driver for installing the remaining three SCSI channels.

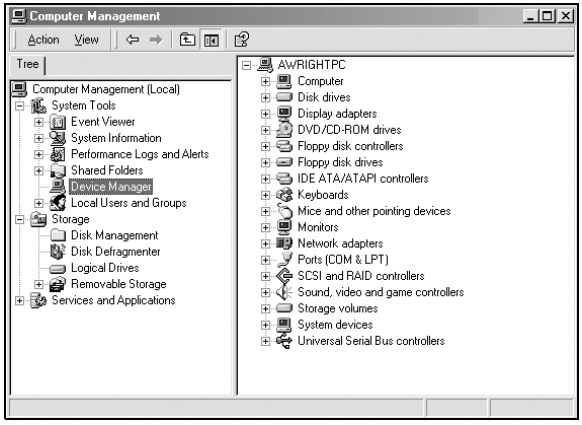
To install the SCSI driver

1. Put a blank formatted diskette into the floppy drive.
2. Put the Drivers CD into the CD-ROM drive.

   The main menu displays.
3. Click **Browse CD**.
4. Browse to the **\win2000\storage\adaptec** folder.
5. Double-click on the **MAKEDISK.BAT** file.

   A command window displays.
6. Follow the instructions in the Command window to create the SCSI driver diskette and leave the diskette in the floppy drive when complete.
7. On the Windows desktop, right-click on the **My Computer** icon and choose **Manage**.

   The Computer Management window displays.



8. In the tree, click **Device Manager**.
9. In the view on the right, select **SCSI RAID controllers** and expand the tree.

   The four SCSI channels appear as SCSI devices. Two are located on the system board and the remaining two are controller boards.
10. Right-click on the first SCSI device in the list and choose **Properties**.
11. Select the **Driver** tab.
12. Click **Update Driver**.
13. Click **Next** when the Upgrade Driver wizard displays.
14. Select **Search for a Suitable device** and click **Next**.
15. Select **Floppy Disk Drive only** and click **Next**.
16. Click **Next**.
17. Click **Finish**.
18. The Computer Management window refreshes and the SCSI device you changed moves to the bottom position in the list.
19. Repeat steps 10 through 17 for the remaining three SCSI devices.
20. Remove the floppy from the drive.

Installing Drivers for Compaq W8000 Systems

You must now install the following four drivers on your Compaq W8000 workstation. These drivers do not need to be installed on IBM 6866 Z Pro workstations:

- Intel Chipset
- Intel Pro100 Network
- Logitech Mouse
- SBAudioPCI128

Installing the Intel Chipset Drivers

To install the latest Intel Chipset drivers

1. Put the Drivers CD in the CD-ROM drive.
2. From the main menu, click **Browse CD**.
3. Browse to the **\win2000\compaq\system\Intelchipset** folder.
4. Double-click on the **Setup.exe** file.
5. Click **Next** at the Install Shield for the Intel Chipset Software Utility.
6. Click **Yes**.
7. Click **Next** to install the software.
8. Select **No** and click **Finish**.
9. Shut down the workstation.
10. Turn on the workstation.

Installing the Intel Pro100 Network Driver

To install the Intel Pro100 Network driver, you must first create a floppy disk from the Drivers CD and then use the disk to install the driver.

To create the Driver diskette

1. Put a blank, formatted diskette in the floppy drive.
2. Put the Drivers CD in the CD-ROM drive.
3. From the main menu, click **Browse CD**.
4. Browse to the **\win2000\compaq\system\IntelPro100\makedisk**. folder.
5. Double-click on the **DCreate.exe** file.
6. From the Create Install Window, select **Windows 2000** and click **Create Disk**.
7. When done, click **OK** and click **Exit** (leave the floppy in the drive).

To Install the Intel Pro100 Network driver

1. On the Windows desktop, right-click on the **My Computer** icon and choose **Manage**.
2. From the tree, click **Device Manager**.
3. In the view on the right, select **Network Adapters** and expand the tree.
4. Left-click **Intel 82559...** and select **Properties**.
5. Select the **Driver** tab.
6. Click **Update Driver**.
7. Click **Next** when the Update Hardware Wizard displays.
8. Select **Search for a suitable device driver** and click **Next**.
9. Select **Floppy Disk Drive only** and click **Next**.
10. Click **Next**.
11. Click **Finish**.
12. Close the window.
13. Remove the floppy from the drive and close the Intel 82557 window.

Installing the Logitech Mouse Driver

You must install this driver if you have the Logitech or Compaq mouse.

To install the Logitech mouse driver

1. Put the Drivers CD into the CD-ROM drive.
2. From the main menu, click **Browse CD**.
3. Browse to the **\win2000\compaq\system\logitech** folder.
4. Double-click on the **Setup.exe** file.
5. Choose **English** and click **OK** to choose Setup Language box.
6. Click **Next** in the Choose Destination Location window.
7. Click **Next** in the Select Program Folder, and the software installs.
8. Select **Yes**, restart and then click **Finish**.
9. Log into the workstation.
10. Click **Yes** to configure the device and follow the instructions to configure the mouse to your needs.

Installing the SoundBlaster AudioPCI128 Driver

When you install this software it removes the USB-Eject button from the Taskbar in the lower right portion of the screen. After the installation of the software you must add the USB-Eject button to the Taskbar.

To install the SoundBlaster AudioPCI128 driver

1. Put the Drivers CD in the CD-ROM drive.
2. From the main menu, click **Browse CD**.
3. Browse to the **\win2000\compaq\system\SBAudioPCI128** folder.
4. Double-click on the **Setup.exe** file.
5. Select **Install Software** and click **Next**.

   The software installs.
6. Click **Finish**.
7. Click **Yes** to restart the workstation but leave the Drivers CD in the CD-ROM drive.

To add the USB Eject button to the taskbar

1. Log into the workstation.
2. Click the **Start** button and choose **Settings** > **Control Panel**.
3. Double-click on **Add/Remove Hardware**.
4. Click **Next**.
5. Select **Uninstall/Unplug a device** and click **Next**.
6. Select **Unplug/Eject a device** and click **Next**.
7. Select Avid Equinox Break-Out-Box and click **Next**.
8. Click **Next**.
9. Click **Finish**.
10. On the Windows desktop, right-click on the **My Computer** icon and select **Manager**.
11. From the tree, click **Device Manager**.

12. In the view on the right, select **Sound, Video, and Game Controllers** and expand the tree.
13. Right-click **Avid Equinox Break-Out-Box** and select **Uninstall**.
14. Click **OK**.
15. Click **Yes** to restart the workstation.
16. Log on when the workstation restarts.
17. Click **Yes**.
18. Click **OK** since the Drivers CD is still in the CD-ROM drive.
19. Browse to the **E:\Win2000\Avid\Equinox\Drivers\BOB** folder.
20. Select **Sirius.sys** and click **Open**.
21. Click **OK**, the driver is installed and the ISB-Eject button is replaced in the Taskbar pointing to the Avid Equinox Break-Out-Box.

Uninstalling Avid|DS

Before you install the latest version of Avid|DS, you must remove any previous versions of the software.

Removing Plug-ins

Before removing the Avid|DS software, you must first remove any plug-ins that were installed on your system.

If you uninstall Avid|DS before uninstalling the plug-ins, the uninstall procedure will fail.

To remove plug-ins on Windows 2000 workstations

1. Click the **Start** button and choose **Settings** > **Control Panel** > **Add/Remove Programs**.
2. Click **Change/Remove**.
3. In the Currently Installed Programs list, check for any installed plug-ins.
4. Select the plug-ins installed on your system (one at a time) and click **Change/Remove**. Repeat this step until they're all removed.
5. Remove all Avid|DS native plug-ins:
   - Dual Audio Channel Switcher
   - Tone Generator

If you cannot uninstall some plug-ins, continue with the next one until completion, and then manually delete the \Plug-In folder. Use the Windows Find utility to help you locate any \Plug-In folders.

Removing the PICVideo MJPEG Codec

On Windows 2000 workstations, the standard definition version of Avid|DS uses the PICVideo MJPEG codec to provide software-based video compression. The Avid|DS Setup program installs the codec automatically, but cannot uninstall it. To complete the uninstallation of the standard definition version of Avid|DS, use the following procedure to remove the PICVideo MJPEG codec.

To remove the PICVideo MJPEG codec

1. Click the **Start** button and choose **Settings** > **Control Panel** > **Sounds and Multimedia**.
2. Select the **Hardware** tab.
3. In the list of devices, select **Video Codecs**.
4. Click **Properties**.
5. Select the **Properties** tab.
6. Select the **PICVideo MJPEG Codec**.

7. Click **Remove**.
8. When prompted, click **Yes** to remove the codec.

Removing Avid|DS

Once you've finished removing the plug-ins, you can uninstall the Avid|DS software.

To remove Avid|DS

1. Click the **Start** button and choose **Settings** > **Control Panel** > **Add/Remove Programs**.
2. Click **Change/Remove**.
3. In the Currently Installed Programs list, select **Avid|DS**.

   The Avid|DS setup program will start.
4. Select the **Remove** option and click **Next**.

   The Confirm File Deletion dialog box is displayed.
5. Click **Yes**.

   The Avid|DS files are removed from your system, and the Maintenance Complete dialog box is displayed.
6. Click **Finish**.

If you're prompted to restart the workstation, do so immediately to properly register the software to the operating system.

Your system is now ready load the Avid|DS software. Proceed to *Installing Avid|DS* on page 81.

Chapter 6 Installing Avid|DS

In This Chapter...

This chapter describes how to install Avid|DS and install/remove fonts.

Before You Install the Software 83
Installing Avid|DS 88
Loading Plug-Ins. 97
Installing and Removing Fonts 98

Before You Install the Software

When installing Avid|DS, you have various setup options depending on your working environment needs. With the new media and project indexing services in Avid|DS, you need to designate one workstation as the master. Naturally, if you have only one Avid|DS workstation, then it will be the master.

If you have more than one Avid|DS workstation, then one of them must be designated as the master and the others connected as slaves. More information on the indexing services and other software options is described in *Avid|DS Software and Services* on page 85.

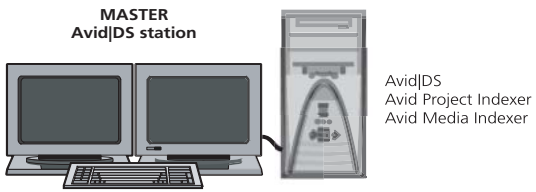
A valid network connection is required for your Avid|DS workstation(s) whether they are networked or running standalone.

The following illustrations show three typical scenarios and where each of the different Avid|DS software components or services would be installed.

Standalone Avid|DS Workstation Configuration

If you have a single Avid|DS workstation, you will need the following software installed.

- Avid|DS
- Avid Project Indexer
- Avid Media Indexer



Avid|DS Workgroup Configuration with RP Station

If you have more than one Avid|DS workstation connected in a workgroup setting, you need to designate one of them as a master. Ideally, if you have an Avid|DS Remote Processing station, this workstation would best serve as the master as it could do all your media processing and indexing, and leave your Avid|DS workstations free for the creative editing tasks.

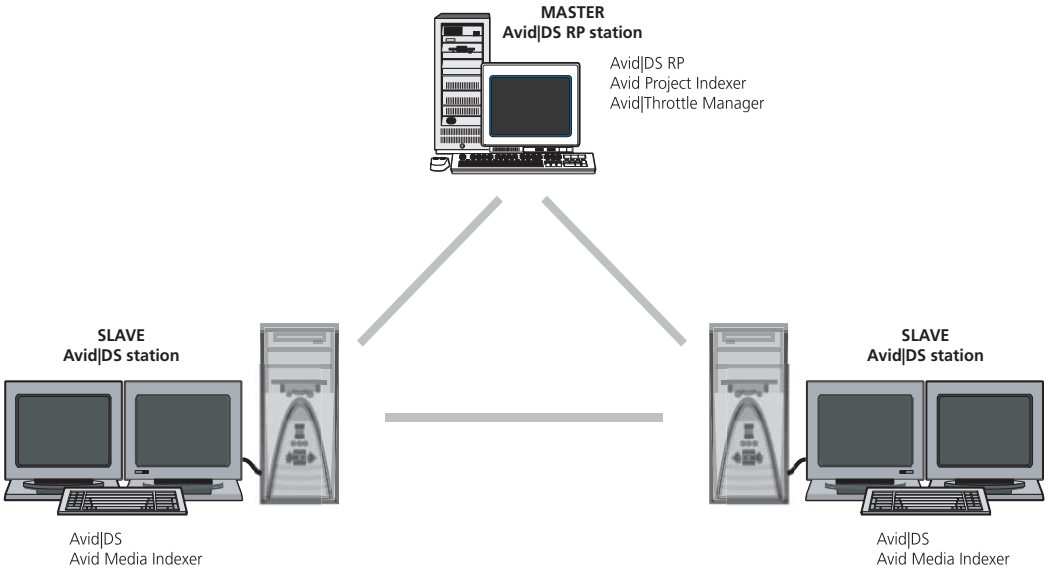
If you designate the RP station as the master of your workgroup, you will need the following software installed on it:

- Avid|DS RP
- Avid Throttle Manager
- Avid Project Indexer

Avid|DS can be installed an RP station but it cannot run at the same time as the RP application.

Any connected Avid|DS workstations (slaves), will need the following software installed:

- Avid|DS
- Avid Media Indexer



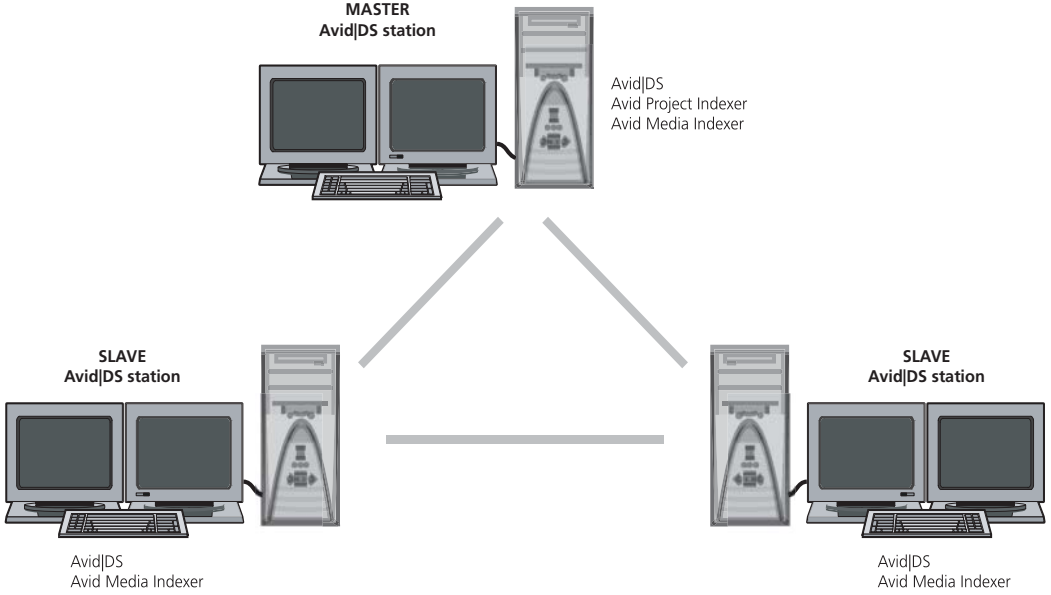
Avid|DS Workgroup Configuration without RP Station

If you have more than one Avid|DS workstation connected in a workgroup setting, you need to designate one of them as a master. The Avid|DS workstation that will serve as the master will need the following software installed on it:

- Avid|DS
- Avid Project Indexer
- Avid Media Indexer

Any other connected Avid|DS workstations (slaves), will need the following software installed:

- Avid|DS
- Avid Media Indexer



Note that you could later connect an RP station to your workgroup. This station would need the following software installed:

- Avid|DS RP
- Avid Throttle Manager (only needs to be installed on one RP station)

Avid|DS Software and Services

The following section describes each of the different software components available in Avid|DS.

Component	Function
Avid|DS	This is the basic Avid|DS software (Avid|DS, Avid|DS HD, or Avid|DS HD Editor) and is installed on a Client workstation allowing you to input and output media and to edit the media in digital format. The Avid|DS workstation can be configured as: • A standalone workstation, which by default is the master • A master workstation within an Avid|DS workgroup of other workstations • A slave workstation within an Avid|DS workgroup
Avid|DS RP	This software is installed on a workstation that will handle all remote processing requests. The Avid|DS RP station processes effects information from another slave or master workstation within the Avid|DS workgroup and returns the results to the workstation when completed. In a workgroup environment, you would set up the Avid|DS RP station as the master. **Important**: You cannot run Avid|DS RP and Avid|DS on the same station.

Component	Function
Avid Project Indexer	The Avid Project Indexer tracks and manages Avid|DS projects on all Avid|DS workstations within the workgroup. The Avid Project Indexer can only be installed on one workstation designated as the workgroup master. Note: The Project Indexer does not need to be installed on a workstation running Avid|DS.
Avid Media Indexer	The Avid Media Indexer is installed on each Avid|DS workstation and manages the media on that workstation and other connected storages. Note: This software is automatically installed on client workstations and RP stations, but is enabled or disabled as needed—see *About the Avid Indexing Services* on page 86 for more information.
Avid|Throttle Manager	The Avid|Throttle Manager software can be installed only on one RP station. Since an Avid|DS client workstation and an RP station can share the same storage, the Throttle Manager software manages access to such shared storages, so that the RP station doesn't interfere with the client workstation during critical times such as playback, capture, and output to tape—see *Installing Avid|Throttle Manager* on page 129.
Licensing Software	This software is needed to validate the Avid|DS software. If you're a new customer, you must request a license file form Avid|DS. When Avid|DS sends you the license, you install it on client workstations. Although a separate license is also needed for the RP station, you can store that license on the Avid|DS client workstation and point to it from the RP station.
Documentation	The documentation library can be installed during the installation of the Avid|DS software. If you do not to install the documentation library, you can still view it from the Drivers CD.

About the Avid Indexing Services

There are two new services offered by Avid|DS to manage your projects and media more efficiently.

The Avid Media Indexer is a service that manages the media on your local workstation. You can also configure it to manage media on other connected workstations. For more information, refer to *Configuring Media Storages* on page 30 of the Avid|DS User's Guide.

The media indexer runs on client workstations configured as:

- A standalone workstation
- A slave within an Avid|DS workgroup
- A master of an Avid|DS workgroup

The Avid Project Indexer is a service that runs only on a workstation that is configured as the master of an Avid|DS workgroup. The project indexer tracks all projects within an Avid|DS workgroup, so when the Purge command is executed within the Avid|DS workgroup, the correct data is purged.

There are a few basic things you need to know about the indexing services before you install the Avid|DS software:

- You need a valid network connection to run the indexing services.
- If you are working on a network with other Avid|DS workstations, you must define the users who will have access to the indexer information either on a Group or User level (the services automatically include everyone in the Administrator and Power User's group on the local system).

Preparing to Set Up an Avid|DS Workgroup

If you are working on a network with other Avid|DS workstations, you will need to create an Avid|DS workgroup to allow sharing and indexing of projects and media between workstations.

Before running the Avid|DS setup, consider the following if you are going to create an Avid|DS workgroup:

1. Determine the workstations that will be in the Avid|DS workgroup before you start installing the Avid|DS software.
2. Pick a name for the Master of the Avid|DS workgroup that is different from the Windows 2000 Network name to avoid confusion.
3. First install the necessary software on the workstation that will be the master of the Avid|DS workgroup, allowing access to the software at the Group level. If your RP station will be the master, then see Step 5 below.
4. Install the Avid|DS software and licensing software on the remaining editing systems that you want in the Avid|DS workgroup and configure them as slaves, allowing access to the software at the Group level from other systems within the Avid|DS workgroup.
5. Install the Remote Processing software on the system(s) you want to use for Remote Processing. The license for the RP system can be stored on a separate system.

Avid|DS RP stations are the only workstations within the Avid workgroup that support Windows XP Professional. All other Avid|DS workstations use Windows 2000.

6. Load the Avid|Throttle Manager software on one, and only one, RP station.
7. During installation, everyone in the Administrator Group and Power Users Group of the local system is automatically allowed access to the Avid|DS services. Avid recommends that all users who need access to Avid|DS services within the Avid Workgroup have accounts in either the Administrator or Power Users group on **each** system in the Avid Workgroup. For example, if you have three systems, one master and two slaves, everyone who needs access to the Media Indexer and Project Indexer should have their user accounts in either the Administrator or Power User's group on all three systems.
8. Some type of network timing software should be used to keep the systems within a workgroup synchronized.

Installing Avid|DS

To install Avid|DS, you must log on with an account that has Administrator privileges.

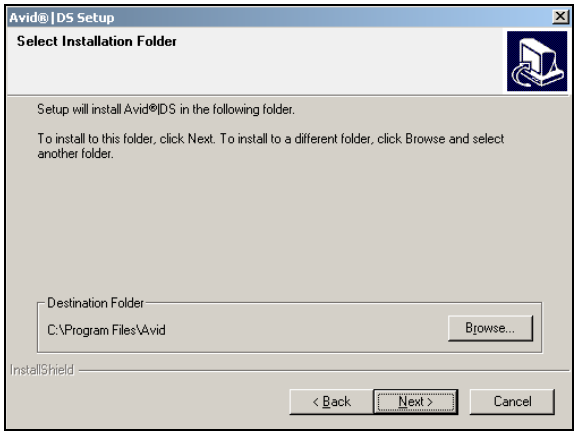
To install Avid|DS

1. Put the Avid|DS CD in the CD-ROM drive.
2. Click **Avid|DS Installation** from the Main Menu.

3. When the Avid|DS Installation Wizard displays, click **Next**.
4. In the License Agreement dialog box, read the End User License Agreement and click **Yes** to accept the terms of the agreement and continue the installation.
5. In the Customer Information dialog box, enter your name and company name, and click **Next**.

6. In the Reseller or Dealer Information dialog box, enter the requested information and click **Next**.

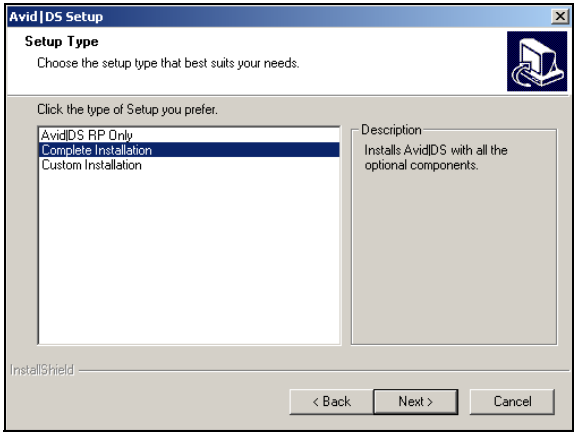
   The Select Installation Folder dialog box is displayed.



7. Do one of the following:

   - Click **Next** to accept the default folder.
   - Click **Browse** to specify a folder in which to install Avid|DS and click **Next**.

   The Setup Type dialog box is displayed.



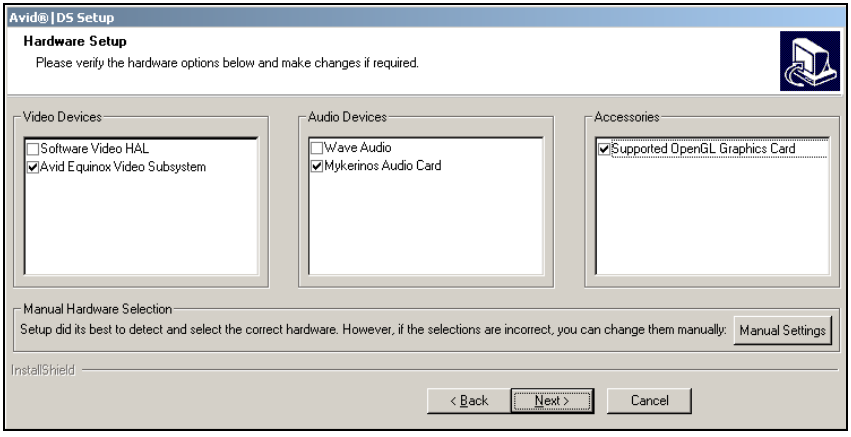
There are three types of installation:

- **Avid|DS RP Only** to install only Avid|DS RP. You won't be able to run Avid|DS, only the remote processor. To install Avid|DS RP, see *Installing the Remote Processing Software* on page 113.
- **Complete Installation** to install Avid|DS and all the optional components.
- **Custom Installation** to install only the Avid|DS components that you select.

8. Select the **Complete** or **Custom** installation option and click **Next**.

To install support for the JL Cooper surface controller, select **Custom Installation** and make sure the **Support for JL Cooper** option is selected.

The Hardware Setup dialog box is displayed.



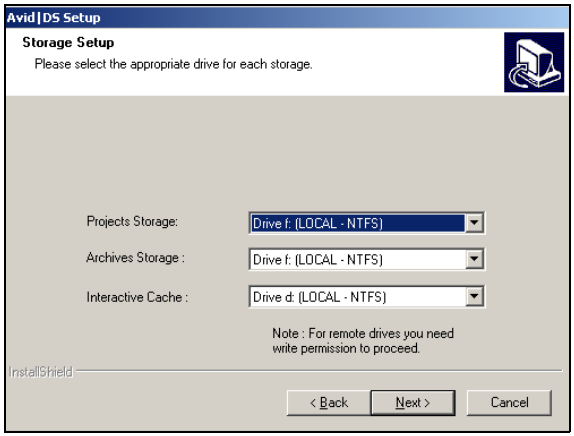
9. Verify that the hardware matches your workstation's configuration:

Workstation	Video devices	Audio devices	Accessories
Compaq EVO W8000	Avid Equinox™ video subsytem	Mykerinos audio card	Supported OpenGL graphics card
IntelliStation Z Pro	Avid Equinox video subsystem	Mykerinos audio card	Supported OpenGL graphics card

If the hardware options don't match your workstation's configuration, click **Manual Settings**, and select the correct hardware options.

10. Click **Next**.

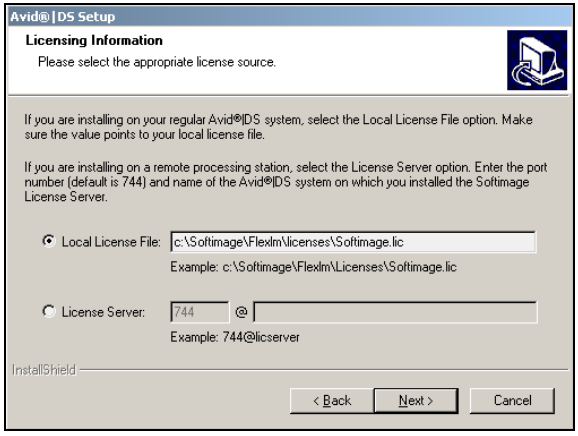
    The Storage Setup dialog box is displayed.



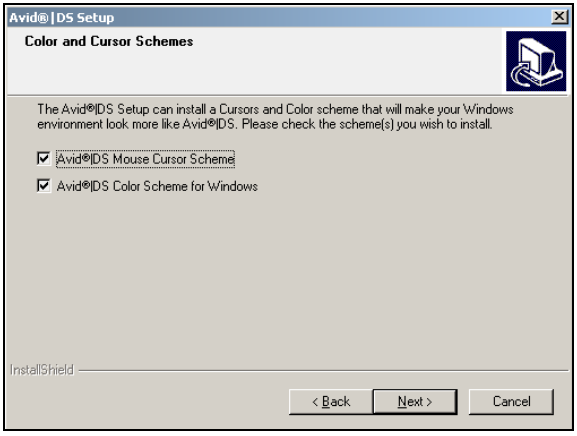
- **Projects Storage**: Select the actual drive letter for your projects and presets storage area.
- **Archives Storage**: Select the actual drive letter for your archives storage area.
- **Interactive Cache**: Select the actual drive letter for your interactive cache storage area. The interactive cache location must be eithr one of the local video storage drivers, or a drive partition other than the system partition (C:\) if the workstation is connected to Avid Unity MediaNetwork.

11. Change the storage locations if necessary, and click **Next**.

    The Licensing Information dialog box is displayed.



12. Since you're installing Avid|DS, select the **Local License File** option, enter the following in the text box: **C:\Softimage\flexlm\Licenses\Softimage.lic** and click **Next**.
13. When the SMTP Server Identification dialog box is displayed, enter the name or IP address of your SMTP server and click **Next**.
14. When the Color and Cursor Schemes dialog box is displayed, select the schemes that you want to install and click **Next**.



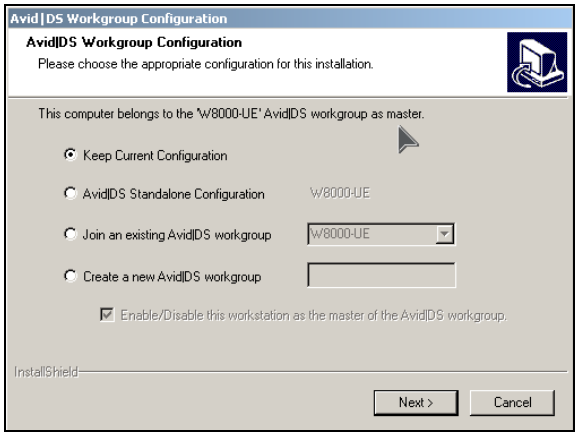
15. When the Start Copying Files dialog box is displayed, review your installation settings and if you're satisfied, click **Next**.

If you need to change options, use the Back button to go as far back as you need to change the options.

A progress indicator is displayed as the Avid|DS files are copied to your system.

At this time the Avid Media Indexer and Project Indexer are automatically installed on the system. They will be enabled or disabled depending on how you configure your system in the next step.

16. The Avid|DS Workgroup Configuration window is displayed.

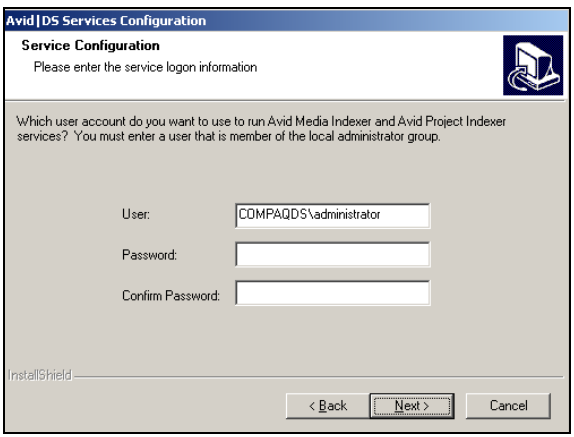


Select one of the following:

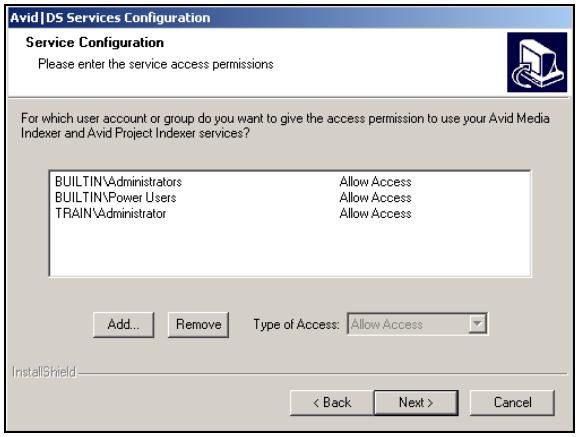
Keep Current Configuration	Keep the original Avid|DS workgroup configuration if you had Avid|DS 6 previously loaded and configured. This option does not apply if you are upgrading from a version prior to 6.0.
Avid|DS Standalone Configuration	If you are not connected to any other Avid|DS workstations. This will install the indexing services on your workstation and make your workstation the master.

Join an existing Avid|DS workgroup	If you are on a network with other Avid|DS workstations, and there is already another Avid|DS workstation designated as the master. This option lets you configure your workstation as part of a group that is able to automatically locate projects or media stored on other workstations within the same group. From the drop-down list, select the Avid|DS workgroup that you want to join. Your workstation will join the workgroup as a "slave". Note that Standalone Workstations also appear as masters in the pulldown menu.
Create a new Avid|DS workgroup	If you are on a network with other Avid|DS workstations, and you want to set up a new Avid|DS workgroup where all workstations in this workgroup can share projects and media. Enter the name for the workgroup. If you want to make this workstation the *master*, then *select* **Enable/Disable this workstation as the master of the Avid|DS workgroup**. If you want to make this workstation a *slave*, then *deselect* this option.

17. Click **Next** to save the Workgroup Configuration.
18. When the Service Configuration Window displays, enter the login information of the user account that will run the Avid Media Indexer and Project Indexer services. The account must be a member of the local administrators group. Click **Next**.



The second Service Configuration Window is displayed.



19. Add the users or group that you want to **Allow Access** to the Avid|DS workgroup. Click **Next**.

During installation everyone in the Administrator Group and Power Users Group of the local system is automatically allowed access to the Avid|DS services. Avid recommends that all users who need access to Avid|DS services within the Avid|DS Workgroup have accounts in either the Administrator or Power Users group on **each** system in the workgroup. For more information, see *About the Avid Indexing Services* on page 86.

Setup now updates your system.

20. Click **Yes** when prompted to install the Documentation Library.

If you do not load the documentation on your system, you will need to install Adobe Acrobat Reader 5.0.5 and the latest revision of Apple QuickTime separately.

21. When the Documentation Library Setup displays, click **Next**.
22. When the Choose Installation Window opens. Do one of the following:
    - Click **Next** to accept the default folder.
    - Click **Browse** to specify a folder in which to install Avid|DS and click **Next**.
23. Click **Next** in the Start Copying Files Window.
24. A window displays to install Adobe Acrobat Reader and Apple Quicktime.
    - Click **Skip** if the programs are already on your system.
    - If you need Adobe Acrobat Reader, click **Install Adobe Acrobat Reader** and follow the instructions on the screen to complete the installation. When complete, you will return to the Avid|DS setup.

- If you need Apple Quicktime, click **Install Apple Quicktime** and install the latest revision from the Apple web site. When complete, you will return to the Avid|DS setup.

  When finished click **Skip**. Your system software is updated.

25. Click **Finish**.
26. Close the Avid|DS Setup window by clicking the X in the top-right corner.
27. Remove the CD from the CD-ROM drive and restart your workstation.

Loading Plug-Ins

Avid|DS provides some plug-ins for use with Avid|DS version 6.x.

To load these plug-ins

1. Insert the Avid|DS CD into your CD-ROM driver and click **Plug-ins** from the Main Menu.
2. A window opens that shows folders that contain the plug-ins.
3. For each plug-in you want to use:
   - Open the folder.
   - Open the **Readme.txt** for that plug-in, and
   - Follow the instructions to load the program.

Installing and Removing Fonts

Avid|DS supports the following typeface formats:

- Type 1
- TrueType (PC-formatted)

Avid|DS does not require any additional software to access TrueType fonts, but does require Adobe Type Manager (ATM) software to access Type 1 fonts.

Included in the *Fonts* folder of the Avid|DS CD are 500 fonts from the Bitstream typeface library.

Installing too many fonts on your workstation can noticeably degrade computing performance. Keep the number of fonts installed on your workstation to the minimum necessary to complete your projects.

Installing and Removing Type 1 Fonts

Type 1 font support in Avid|DS is available only if you have the Adobe Type Manager or Adobe Type Manager Deluxe software (version 4.0 or later) installed and active. Consult the documentation that came with the Adobe Type Manager or Adobe Type Manager Deluxe software for instructions on how to install and remove Type 1 fonts.

Installing and Removing TrueType Fonts

TrueType font support in Avid|DS does not require any additional software.

To install TrueType fonts

1. Click the **Start** button and choose **Settings** > **Control Panel** > **Fonts**.

   The Fonts window is displayed.

2. From the File menu, choose **Install New Font**.

   The Add Fonts dialog box is displayed.

   Use the Folders and Drives lists to navigate to the folder that contains the TrueType fonts you want to install. On the Avid|DS CD, they're in the \Fonts folder.

   The available TrueType fonts in the selected folder appear in the List of Fonts list.

3. Select the fonts to install from the **List of Fonts** list, as follows:
   - To select a single font, click the name of the font.
   - To select a range of fonts, click the name of the first font. Then Shift-click the last font in the range.
   - To select all fonts in the directory, click **Select All**.
   - To switch the selection of a font, press the Ctrl key and click a font name.
4. (Optional) You can use the selected fonts from their current folder by deselecting the **Copy fonts to Fonts folder** option. This will save disk space on your local workstation.

   By default, fonts will be added to your workstation's local disk space. If you are adding several fonts, consider using the fonts from their current locations to save local disk space.
5. Click **OK**.

   The selected fonts are installed on your system.
6. If Avid|DS is currently running, restart it to access the newly installed fonts.

To remove TrueType fonts

1. Click the **Start** button and choose **Settings** > **Control Panel** > **Fonts**.

   The Fonts window is displayed.
2. Select the fonts to remove.
3. Press Delete.

   You are prompted to confirm the deletion of the selected fonts.
4. Click **Yes**.
5. Close the Fonts and Control Panel windows.
6. If Avid|DS is currently running, restart it to update the list of available fonts.

Installing Non-European Fonts

If you are working with on non-European customized Windows, such as Windows 2000 Japanese, you can use the DSFontSetting.exe application, which is distributed with Avid|DS version 6. You can use this application to change the default font used in Avid|DS dialog boxes or reset it to default.

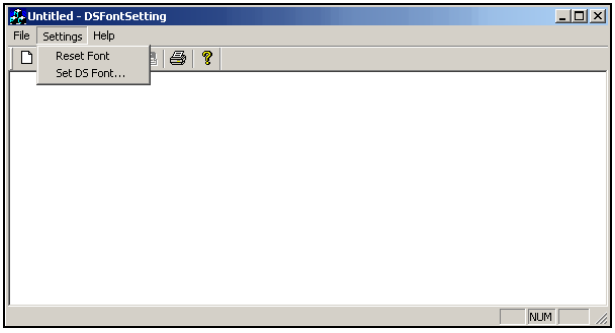
The new font is used only in dialog boxes; menus and toolbar buttons are not affected by this new information. You can customize the menu font size through the Windows Appearance tab of the Desktop Properties.

For non-European languages, Avid|DS selects a font (by default) that comprises the European character set and is part of the character set of the foreign Windows system, such as Windows 2000 Japanese. However, the chosen font is very small and does not appear properly, especially in dialog boxes. For regular systems, the default font for dialog boxes is Arial 11.

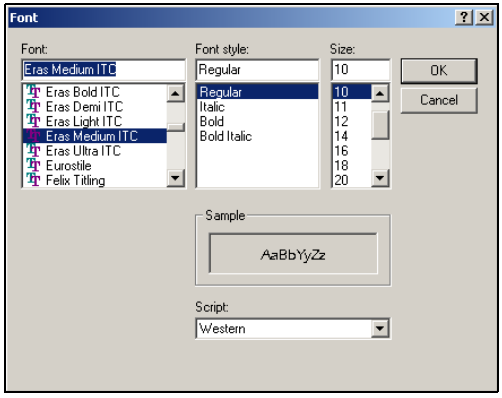
This application does not ensure that the font will fit properly in the dialog box. Whenever the new selected font is too large for the various text contents of the dialog box, a smaller default font will be used as in previous versions. You must be careful to choose a font that still contains a European character set, since the displayed text is still English. this new feature is not restricted only to Asian systems; any customer of any country can change the Avid|DS default font. However, layouts work best with the actual default font (Ariel 11). Each time a new font is set or reset, you must restart Avid\DS before it take effect.

To install non-European fonts

1. Browse to the **C:\Program Files\Avid\DS_6.01** folder.
2. Double-click on the **DSFontsettings.exe** file.



3. From the Settings menu, you can choose one of two options:
   - **Reset Font** to reset the fonts to their default setting.
   - **Set DS Font** to choose the Font and size you want to use in the dialog click. Click **OK**.



Some tips!

- For best results, use a font size between 8 and 14 points.
- If the font selected is a little too big to be displayed in its designated area, it will be substituted by the default font size.
- If the font size is really too big, the layout will not appear correctly, and you may need to refresh the screen.

Chapter 7 Licensing Avid|DS and Avid|DS RP

In This Chapter...

This chapter describes how to request, install, and troubleshoot the license file on an Avid|DS workstation.

Requesting a License File 105

Softimage Licensing Program 106

Creating a Valid License File 108

Solving Licensing Problems 110

Requesting a License File

Avid|DS version 6 requires a new license file to validate the software. This license is provided to all valid Avid|DS customers and replaces the existing license file. To run Avid|DS, you must have a license file, as well as a software protection key (Flexed dongle) connected to your parallel port.

To request a license file

- Open your Internet browser and go to **http://www.softimage.com/licenserequest** to submit a license request.

You must provide all the information requested in order to obtain your license in a timely manner.

Avid|DS Customer Service does not generate permanent licenses. However, if your license is incorrect or if you haven't received it within 72 hours of your request, Customer Service can generate a limited one-week license. Your reseller must validate the request.

Softimage Licensing Program

Once you have received your licensing key from Avid|DS you must replace the old key with a new key in the licensing file on the system.

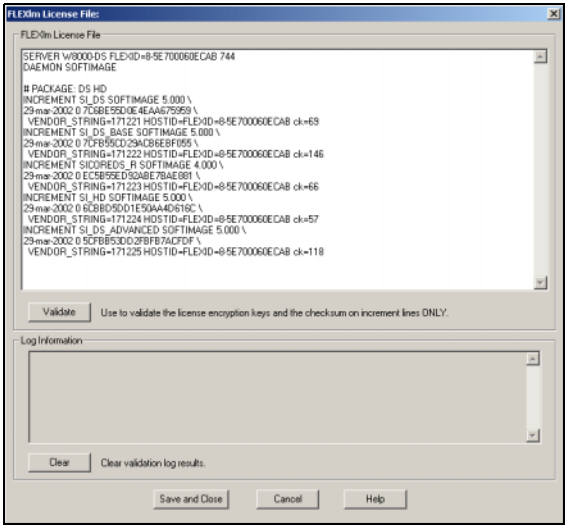
Before licensing the Avid|DS version 6 software, you must verify the version of the Softimage Licensing program.

To verify the version of the Softimage Licensing program

1. Click the **Start** button and choose **Programs** > **SOFTIMAGE Products** > **Licensing** > **LicTools**.
2. Click **Existing License or New License**.

   The License File Window opens showing the existing license file name.
3. Select SoftImage(.lic) and click **Open**.

   Your Existing License File appears.



4. Verify if the license text contains SENTINEL_KEY or FLEXID values before the dongle identifier (7-b285xxxx or 8-5E7000xxxxxx).

   For example; SERVER "*Computer_Name*" FLEXID = 8-5E7000xxxxxx 744

   - A FLEXID value indicates that the Softimage Licensing program is up to date and does not need a new installation, close the window and continue to *Creating a Valid License File* on page 108.

- If your license contains SENTINEL_KEY, and not FLEXID, it indicates an older version of the Softimage Licensing program. You must update to the new version from the Software CD-ROM. Close the window and continue.

Do NOT uninstall the old version of the Softimage Licensing program. All you need to do is replace the old license with the old one.

5. Put the Avid|DS CD in the CD-ROM drive.
6. From the menu, choose **Licensing Setup**.
7. Proceed with a default installation of the Softimage Licensing program.
8. When prompted, choose **Replace** to overwrite the current licensing program.
9. When the LicTools utility opens, choose **Enter Key Later**.
10. Click **Finish** to exit the Setup program.

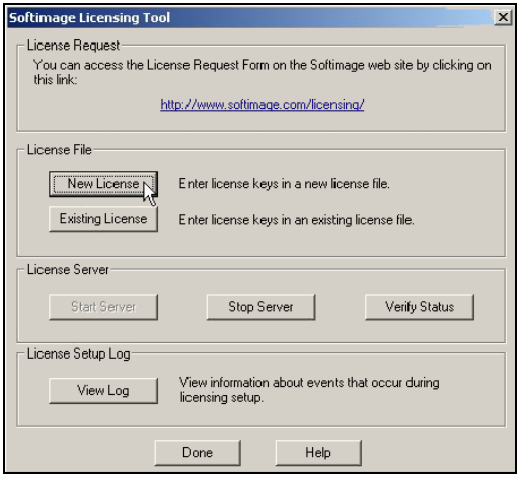
Now you have have the newest copy of the licensing program that includes FLEXID. This is only a bare bones license file. You must now create a valid license using the new key that you ordered from Avid|DS.

Creating a Valid License File

Once you have verified that your existing license is the proper version and you have received your license from Softimage Licensing, you can create the valid license file on your client workstation.

To create and validate a license file

1. Click the **Start** button and choose **Programs** > **SOFTIMAGE Products** > **Licensing** > **LicTools**.

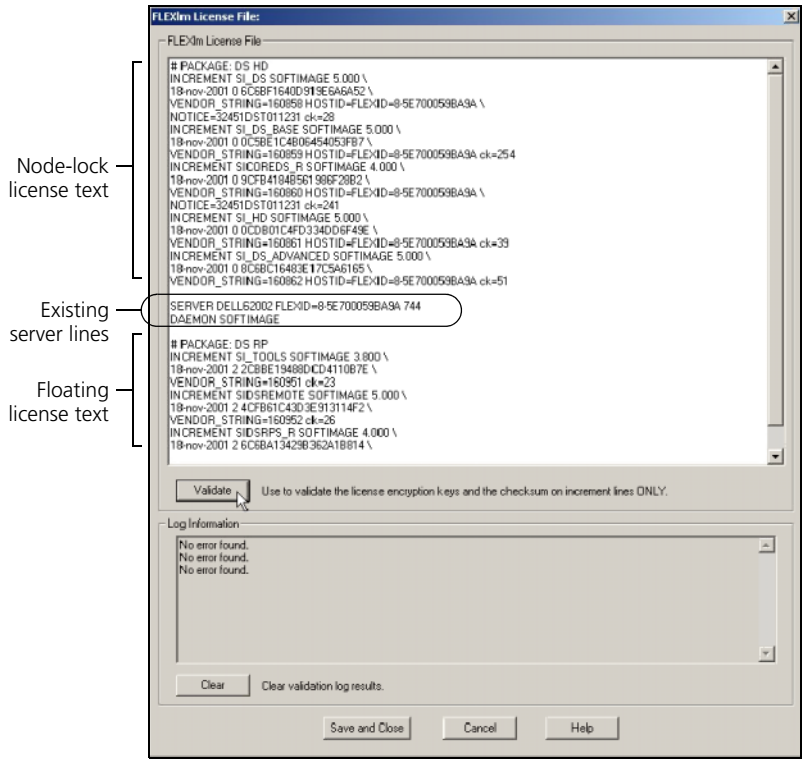


2. Do one of the following:
   - If you are creating a new license file, click **New License**.
   - If you have an existing license file and need to add the floating license for remote processing, click **Existing License**.
3. You will normally click **Existing License**, since you want to replace the old license with the new one you received from Avid\DS for the new release.

   The License File Window opens showing the existing license file name.
4. Select SoftImage(.lic) and click **Open**.

The FLEXlm License File dialog box is displayed.

5. If your file doesn't look similar to the one below (DS key on top, Existing server lines and then RP key), edit it to make sure you place the keys in the positions shown in the file below.



6. Copy and paste the node-lock license text(the new license you received from Avid|DS for the client workstation) from the licensing e-mail before the existing SERVER lines.

7. Copy and paste the floating license (RP licenses if you have ordered them) text after the SERVER lines.

8. Click **Validate** and check the Log Information dialog box:

   - If no error is reported, save and close the license file.
   - If there are reported errors, check the FLEXlm License File window for typos in the license text. If you cannot locate the source of the problem, contact Avid|DS Customer Service.

Solving Licensing Problems

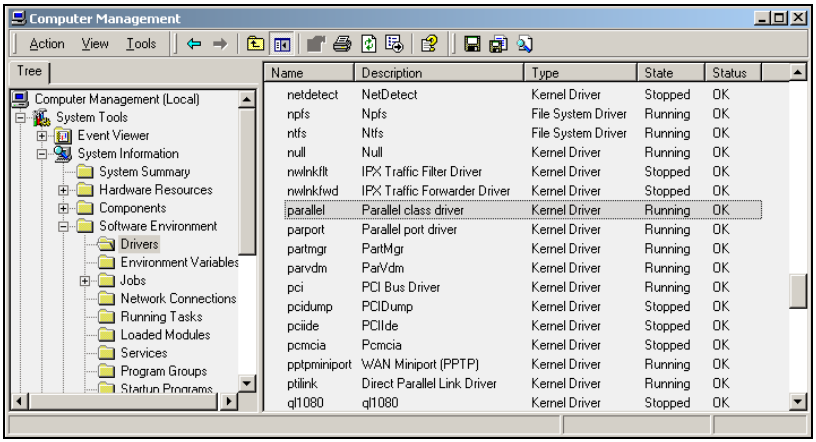
Before you can start Avid|DS, your system needs a software protection key (dongle) and a license file. If the dongle identification number matches the information in the license file, Avid|DS will start.

If the licensing components are not properly set up, Avid|DS will not start and an error message is displayed. If this occurs, try the following troubleshooting steps or refer to the Troubleshooting section of the Avid|DS Drivers CD. If startup problems persist, contact your reseller.

To verify that the dongle is properly installed on a Windows 2000 workstation

1. Make sure that the dongle is attached to the base unit's parallel port (LPT1) and secured with the locking screws—refer to *The Software Protection Key* on page 59.
2. On the Windows desktop, right-click on the **My Computer** icon and choose **Manage**.

   The Computer Management window is displayed.



3. Use the tree (left) to navigate to the **System Tools** > **System Information** > **Software Environment** > **Drivers** folder.
4. Scroll down the list until you find the **Parallel**, **DS1410D**, and **Sentinel** devices, and verify the following for each device:
   - **State**: Running
   - **Status**: OK

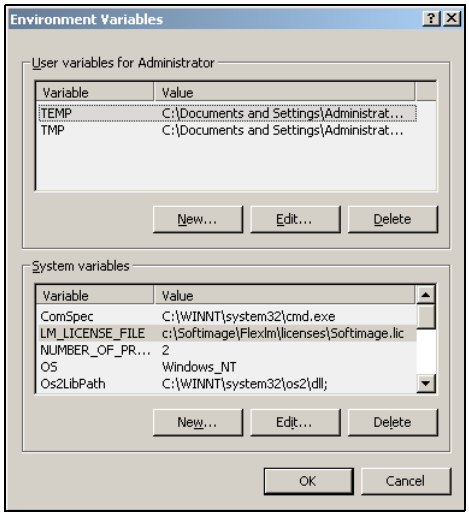
To verify the environment setting for the license file

1. Click the **Start** button and choose **Settings** > **Control Panel**.
2. Double-click on **System**.

   The System Properties dialog box is displayed.

   • Select the **Advanced** tab and click **Environment Variables**.

   The Environment Variables dialog box is displayed.



3. From the System Variables list, select **LM_LICENSE_FILE**.

   Its value should be: **C:\Softimage\Flexlm\Licenses\Softimage.lic**.

4. If it is not, click **Edit**.

   The Edit System Variable dialog box is displayed.

5. Enter the following path in the Variable Value text box: **C:\Softimage\Flexlm\Licenses\Softimage.lic**. Click **OK**.
6. In the Environment Variable dialog box, click **OK**.
7. In the System Properties dialog box, click **OK** to finish.

Chapter 8 Installing the Remote Processing Software

In This Chapter...

This chapter provides information regarding use and installation of software for a Remote Processing station.

An Introduction to Avid|DS Remote Processing 115
Avid|DS RP Station Requirements 117
CPU Usage on Avid|DS RP Stations 118
Typical Networking Configurations 119
Optimizing the Network 121
Installing Avid|DS RP 123
Licensing Avid|DS RP 128
Installing Avid|Throttle Manager 129
Troubleshooting Avid|DS RP 130

An Introduction to Avid|DS Remote Processing

Processing, or rendering, is a normal and necessary part of the Avid|DS workflow, as with any system that handles complex compositing and effects. Unfortunately for editors, artists, and their clients, processing takes up time and resources on the workstation being used, and can present frequent and lengthy interruptions to the creative process.

Instead of waiting for Avid|DS to process your effects, you can send a processing job to a remote workstation that is running Avid|DS RP (remote processor) and continue working on your sequence.

You can install the remote processing software on any number of workstations on your network, and send processing jobs to any one of them. Avid|DS RP processes the effects, returns the cache media to the Avid|DS client storages, and notifies the client workstation when the job is complete. You can specify where the caches will be stored, either on a shared storage device or on your local workstation.

You cannot send requests from earlier versions of Avid|DS to Avid|DS RP version 6. You can only send requests from Avid|DS version 6 to Avid|DS RP version 6.

Avid|DS uses a mail-type system to communicate with the remote processing station. An Outbox contains all the jobs that you sent out for processing, and an Inbox contains all the jobs that have returned. When a job returns from the remote processing station, Avid|DS receives a mail notifying it that the job is complete. The caches generated from the processing are automatically linked back to your current project.

Avid|DS RP only supports uncompressed media. You can, however, process your caches remotely using lower resolutions. For more information, refer to *Processing Effects on a Remote Processing Station* on page 129 of the Avid|DS Compositing & Effects Guide.

Remote Processing Concepts

Before you begin configuring your workstations for remote processing, there are a few terms you need to understand:

Client Workstation: This is the workstation on which Avid|DS is installed. The *client workstation* is where the processing request is initiated. The request is sent to the remote processing station, and the result is eventually returned to the client.

Remote Processing Station: This is the station where the Avid|DS RP application is installed. The RP station can be configured as a master or a slave in the Avid|DS workgroup. Avid|DS does not run on this workstation. Instead, the remote processing station handles requests from the client workstation and updates the client's timeline as each request is processed. Remote

Processing stations support both the Windows XP Professional operating system and the Windows 2000 operating system. Other Avid|DS client workstation *only* support the Windows 2000 operating system.

A client workstation can also be set up as a remote processing station. However, you cannot run Avid|DS when Avid|DS RP is running. This allows you to do remote processing on any client workstations that are not currently being used.

Floating License: The license for the remote processing station is on the client workstation. This license information is appended to the dongle-based (or "nodelock") information in the Softimage.lic file. In this context, the client workstation is a "license server" for the remote processing station.

Avid|Throttle Manager

Avid|DS workstations share their storages with Avid|DS RP stations during remote processing. The Avid|Throttle Manager (installed separately from the RP software and installed only on one system) manages access to such shared storages, so that the remote processing doesn't interfere with the Avid|DS workstation at critical times, such as during playback, capture, and output to tape.

On startup, Avid|DS and Avid|DS RP indicate to the Avid|Throttle Manager which shared storages they are using. The Avid|Throttle Manager then monitors how your Avid|DS workstation and Avid|DS RP station are using the shared storage, such as for playback, capture, output, or processing.

On an Avid|DS workstation, playback, capture and output to tape are the critical operations which require a guaranteed bandwidth between the workstation and its storage. During these operations, the Avid|Throttle Manager will pause any RP stations using the same storage for processing in order to maintain that bandwidth. Once the playback, capture, or output to tape operation is complete, the Avid|Throttle Manager restarts the processing on the RP stations.

If you are not using the Avid|Throttle Manager to manage your shared storage, do *not* try to perform intensive tasks like playback, capture, and output to tape on the client workstation while processing on the RP station.

Avid|DS RP Station Requirements

The remote processing station must meet the following requirements:

- Supports both Windows XP Professional and Windows 2000 Professional operating systems.

Windows NT 4.0 is no longer supported.

- Intel Pentium II 400 MHz (single or dual CPU; MMX not enabled), Intel Pentium III up to 1 GHz (single or dual CPU; MMX enabled), or Intel Pentium 4.

Intel Celeron and AMD processors are not supported.

- 512 MB RAM (or 1.5 GB RAM if the RP station will be used with Avid|DS HD)
- 1 GB of hard drive space
- SVGA monitor with a recommended resolution of 1280×1024
- Network card (100 Mbps minimum recommended)
- **Network protocol**: All of the workstations being used for your workgroup must reside on a network that uses the TCP/IP protocol. Each workstation must be able to see the others over the network.
- **Fonts**: All Windows fonts used on the Avid|DS client workstations must also be installed on the remote processing station to prevent processing errors with titles.
- **Third-party plug-ins**: To process effects involving third-party plug-ins, the plug-ins must be installed on the remote processing station that is handling the processing. So, if you have multiple remote processing stations on your network, all users should be aware of which remote processing station has the third-party plug-ins that they need.

Third-party plug-in vendors handle the licensing for remote processing of third-party plug-ins.

- **OpenGL for 3D DVE**: In Avid|DS, only the 3D DVE layout uses OpenGL. An Avid|DS RP station does not require an OpenGL card to process OpenGL effects. However, these effects will process significantly faster if the remote processing station has an OpenGL card.

It is recommended that you use the same type of OpenGL card in your RP station as you have in your client workstation.

CPU Usage on Avid|DS RP Stations

In some cases, users may find that the CPU usage on their RP station or their client workstation during processing is low. This may be more obvious when the RP station is a faster machine, and in some cases the CPU usage may be lower on the RP station than on the client workstation. This is a normal occurrence however.

CPU usage is an indicator of processor activity. The faster the processor, the faster it completes its job (processing the current frame). If the CPU has to wait for the next frame read from disk to start processing the frame, the CPU usage is lowered.

This is normal, and it depends on the effect being processed. For simple light effects, like a color correction, the processing is fast enough that the CPU is actually idling most of the time. This appears as a low CPU usage value. These effects are said to be "I/O-bound", meaning that the Read/Write operations involved for each processed frame are more significant than the actual processing. Because Avid|DS is fully multi-threaded, the processing itself and the I/O operations are done in parallel. However, if the CPU is idling most of the time, a low CPU Usage value is to be expected.

Most native Avid|DS effects support multi-threading and, in addition to this, processing jobs can be divided among the CPUs available in the workstation. For example, on a dual-CPU workstation, when a blur effect is processed, half the frame is processed on one CPU while the other half is processed on the other. This dramatically improves the overall processing time.

In these cases, because only one of the CPUs is being used, the CPU usage never goes above 50%.

To verify if an effect is single or multi-threaded,

1. Click the **Start** button and choose **Run** and enter **perfmon in the Run window** to run the Performance Monitor.
2. Add one counter for each CPU Time.

For multi-threaded effects, the two curves move together while processing. In single-threaded effects, they move in opposite directions.

CPU usage can be affected by the RP license (single, or dual). An RP license for one processor will force the RP station into single-thread mode, and the CPU usage will never exceed 50%.

CPU usage usually appears higher on the client machine (if it has the same processor type as the RP). This is because the Read/Write operations are faster on the client (local storage). As a result, the processor spends less time waiting for input frames before processing them.

Typical Networking Configurations

On the network, there are two possible ways of setting up your site with remote processing stations:

Point-to-point: A single client workstation is connected to a single remote processing station.

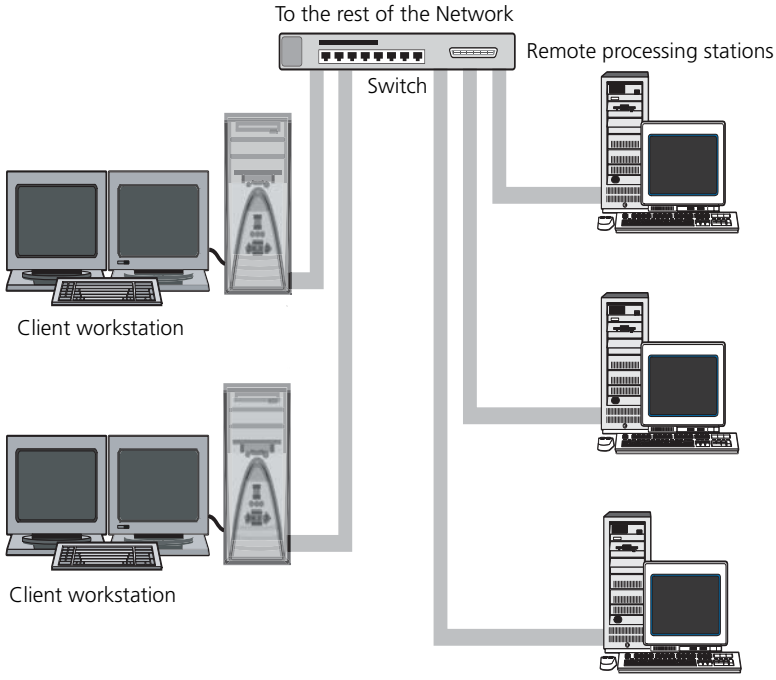
Workgroup: One or more client workstations are connected to one or more remote processing stations.

Point-to-point Setup

The point-to-point setup consists of a single client workstation directly connected to a single remote processing station. Both workstations are connected using high-quality crossover network cable.

Workgroup Setup

The workgroup setup consists of one or more client workstations with one or more remote processing stations.



This mini-network is isolated, and is not part of a larger corporate network. However, you need a network switch to isolate the traffic between the different client workstations and the remote processing stations within the workgroup.

A network hub is not recommended for this configuration because a hub broadcasts addresses and information while a switch has multiple paths and generates an actual IP address for higher throughput.

In a workgroup configuration, all user accounts must be defined on each of the workstations within the workgroup.

Domain

If the client workstation(s) and remote processing station(s) are already part of a corporate network, you can use a *domain* configuration. In this case, only one account needs to be created on the domain. This domain can be accessed by all workstations. For more information, consult your network administrator or your networking documentation.

Optimizing the Network

Remote processing is largely dependent on the configuration of the network that links the client and remote processing station. Special care must be taken to obtain the maximum available bandwidth.

Authentication and Security

Since remote processing is based on shared folders within a Windows network, take special care when creating user accounts for the people who will be using the remote processing stations.

Administrator Privileges

Remote processing involves shared folders on both the remote processing station and the client workstation. Users who plan to use remote processing must log on to the remote processing station and the client workstation using an account with local administrator privileges. These users should be either in the Administrators or Power Users groups.

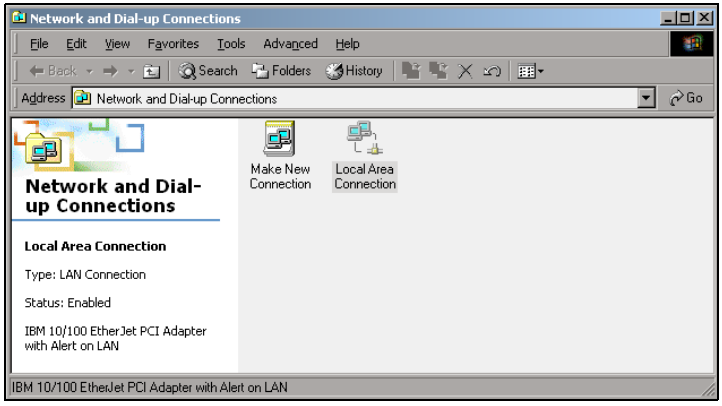
Networking Protocol

Avid|DS RP uses the TCP/IP networking protocol for licensing. Other protocols don't need to be installed, unless they're required for other network activities.

To see which networking protocols are installed on Windows 2000

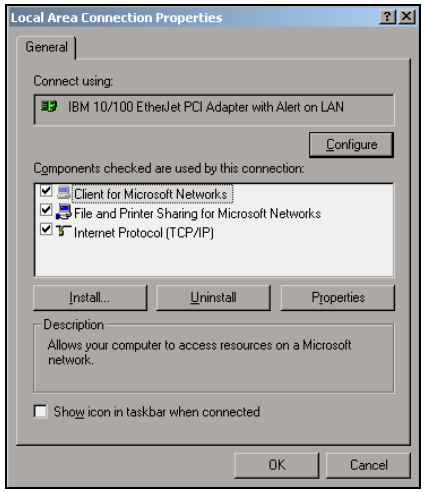
1. On the Windows desktop, right-click on the **My Network Places icon** and choose **Properties**.

   The following window is displayed.



2. Right-click on Local Area Connection and choose **Properties**.

   A dialog box similar to the following is displayed.



The TCP/IP network protocol must always appear at the top of the list of protocols.

Network Addressing

Since the Licensing program uses specific classes of IP addresses, you must enter valid IP Address and Subnet mask values or the licensing server will not function. In particular, IP addresses in the Private Address Space cannot be used unless the Avid|DS RP station and the License server (client workstation) are on the same side of their network router.

Refer to your system administrator or networking documents for more details.

Network Hardware and Remote Processing Performance

To optimize your network hardware and the performance of remote processing:

- The recommended minimum speed of your network card is 100 Mbps full duplex as this speed matches that of the client workstation. Gigabit Ethernet is better, but you would need to upgrade the client workstation as well.
- A network switch is the best way to isolate the remote processing traffic from the rest of a corporate network. We recommend a minimum bandwidth of 100 Mbps and full duplex capability, however, a gigabit switch is preferable. For the highest quality components, purchase brand name products, such as 3Com, Cisco, etc.

Hubs are not recommended.

- Use 24AGW gauge network cable (category 5 and up). Connectors must be assembled properly, with a minimal length of unshielded wire on both ends.

Installing Avid|DS RP

Before you set up a remote processing station you must:

- Make sure you have at least one client workstation configured as a master.
- Make sure that the license server software is installed and running on a client workstation within the workgroup.
- Make sure that the floating license is appended to the Avid|DS license file on one of the client workstations in the workgroup.

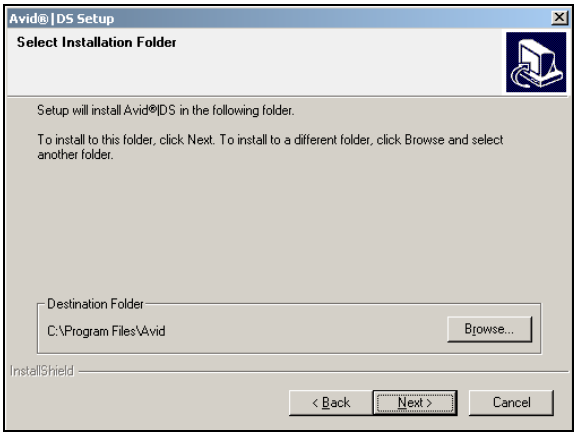
Before you install the Avid|DS RP software:

- Make sure you have sufficient space on the installation drive.
- After the installation, the drive must have over 20% of free space at all times.
- The AutoSave files are saved under \Program Files\Avid\DS_v6.0\DSSystem\Temp.*username* and have four duplicates. Keep monitoring your sufficient disk space, otherwise the software and/or operating system may cease to operate.

To install Avid|DS RP on a remote processing station

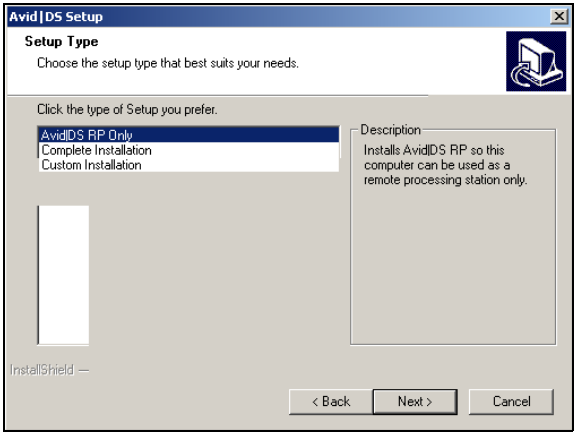
1. Place the Avid|DS CD into the CD-ROM drive.
2. Click **Avid|DS Installation** from the Main Menu.
3. The Avid|DS Installation Wizard appears, click **Next**.
4. In the License Agreement dialog box, read the End User License Agreement and click **Yes** to accept the terms of the agreement and continue the installation.
5. In the Customer Information dialog box, enter your name and company name, and click **Next**.
6. In the Reseller or Dealer Information dialog box, enter the requested information and click **Next**.

The Select Installation Folder dialog box is displayed.



7. Do one of the following:
   - Click **Next** to accept the default folder.
   - Click **Browse** to specify a folder in which to install Avid|DS RP and click **Next**.

     The Setup Type dialog box is displayed.

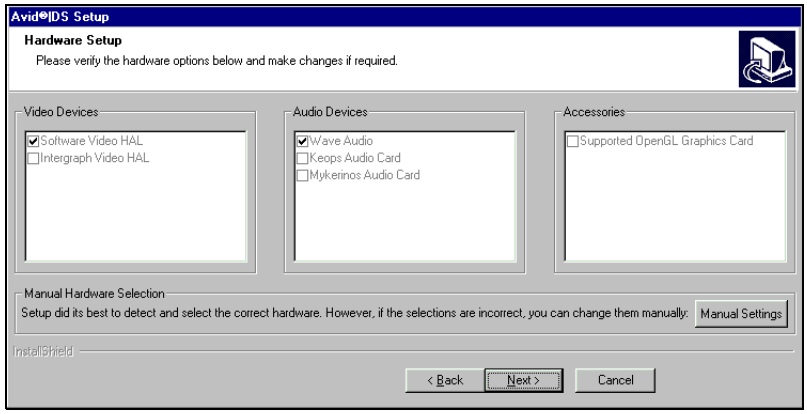


There are three types of installation:

- **Avid|DS RP Only** to install only Avid|DS RP. You won't be able to run Avid|DS on this workstation, only the remote processor.
- **Complete Installation** to install Avid|DS and all the optional components.
- **Custom Installation** to install only the Avid|DS components that you select.

8. Select the **Avid|DS RP Only** option and click **Next**.

   The Hardware Setup dialog box is displayed.

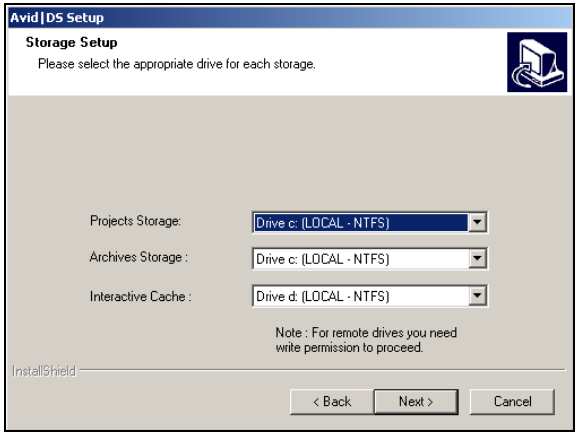


9. Verify that the hardware matches your workstation's configuration:

   If the hardware options don't match your workstation's configuration, click **Manual Settings**, and select the correct hardware options.

10. Click **Next**.

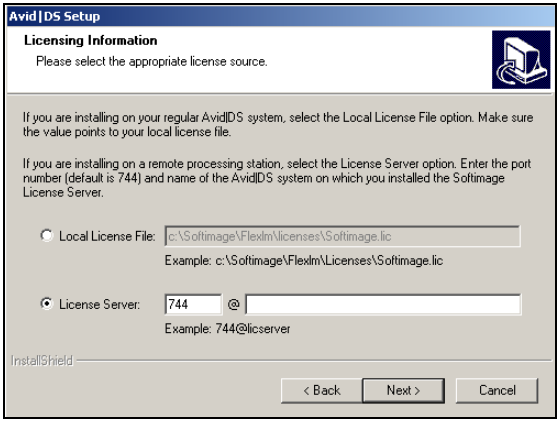
    The Storage Setup dialog box is displayed. If the remote processing station does not have the standard Avid|DS drive partitions, simply install it on the available drives. If only one drive is available, make sure you have sufficient space for the program, expected projects, and temporary media files generated from the Avid|DS client processing requests.



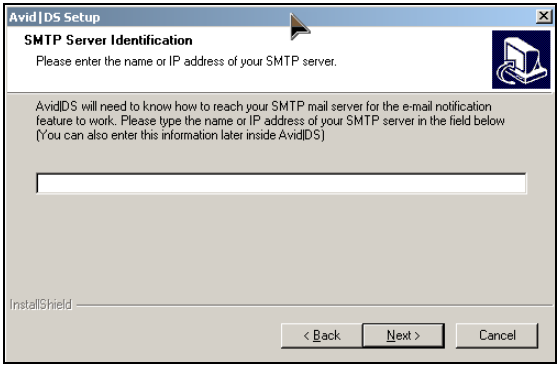
- **Projects Storage**: Select the actual drive letter for your projects and presets storage area.
- **Archives Storage**: Select the actual drive letter for your archives storage area.
- **Interactive Cache**: Select the actual drive letter for your interactive cache storage area.

11. Change the storage locations if necessary, and click **Next**.

    The Licensing Information dialog box is displayed.



12. Since you're installing Avid|DS RP only, select the **License Server** option, and enter the following in the text box: ***744@machine_name*** (*machine_name* is the network name of the computer that contains the RP license—see *Licensing Avid|DS and Avid|DS RP* on page 103).
13. Click **Next**.
14. When the SMTP Server Identification dialog box is displayed, enter the name or IP address of your SMTP server and click **Next**.



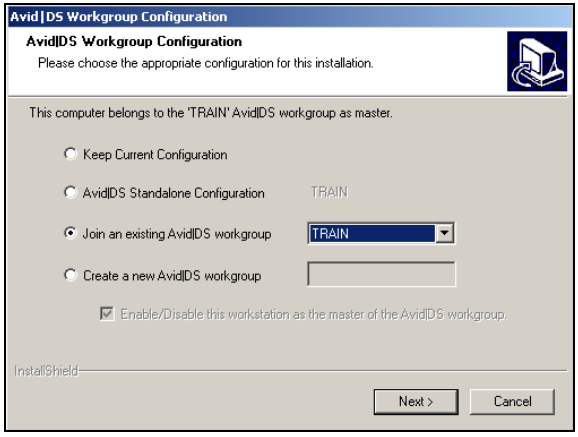
15. When the Start Copying Files dialog box is displayed, review your installation settings and if you're satisfied, click **Next**.

If you need to change options use the Back button to go as far back as you need to change the options.

A progress indicator is displayed as the Avid|DS RP files are copied to your workstation.

At this time Media Indexer and Project Indexer are automatically installed on the system. These files are installed but *not* enabled.

16. When the Workgroup Configuration window displays, configure your workstation as a **Join an Existing Avid|DS Workgroup** and choose the master of the workgroup from the pulldown menu.



17. Click **Next** to save the Workgroup Configuration.
18. When the Service Configuration Window opens, enter your login information. Click **Next**.
19. Add the users or group that you want to **Allow Access** to the Avid|DS workgroup. These should be the same users specified in the Administrator or Power user's group of the Client Workstations. Click **Next**.

    Setup now updates your workstation.
20. Your workstation software is updated and the Install Wizard Window opens. Click **Finish**.

Licensing Avid|DS RP

This version of Avid|DS requires a new license file to validate the software. This license is provided to all valid Avid|DS customers. In order to use Remote Processing, your license file must also include a floating license. See *Licensing Avid|DS and Avid|DS RP* on page 103 for instructions to install your RP license.

The Softimage License Server must be installed and the license files must be created on a client workstation, *not* an RP station.

Installing Avid|Throttle Manager

The Avid|Throttle Manager allows for more efficient bandwidth management between your workstation, storage areas, and an Avid|DS RP machine.

For instance, if you want to playback your sequence on the timeline, the Avid|Throttle Manager temporarily suspends any processing requests to an Avid|DS RP station, or capture or output from/to a deck to allow for the full bandwidth to be used for real-time playback. Once the sequence playback is complete, the Avid|Throttle Manager resumes the other processes.

The Avid|Throttle Manager must be installed on only one RP system on the same network as your Avid|DS workgroup.

Do not install the Avid|Throttle Manager on the Avid|DS workstation configured as a master or a slave running the Avid|DS software.

To install the Avid|Throttle Manager

1. Put the Avid|DS 6.x CD into your CD-ROM drive.
2. From the main menu, Avid|DS choose **Avid|Throttle Manager** and follow the onscreen instructions to complete the installation.

To uninstall the Avid|Throttle Manager

- Click the **Start** button and choose **Programs** > **Avid Products** > **Avid Throttle Manager**, choose **Uninstall** and follow the onscreen instructions to remove the Avid|Throttle Manager.

Troubleshooting Avid|DS RP

You might encounter some questions when using Remote Processing. Some of the questions and answers are shown below.

There's a licensing error when I start Avid|DS RP.

First, you should read the error message. FLEXlm errors are sometimes easy to fix and good indications are inserted in the error message. Consult the GLOBEtrotter web document for error code explanation.

C:\Softimage\FLEXLM\Flexuser\chap10.htm.

Avid|DS RP starts, but an error in the interface points to licensing.

Although Avid|DS RP starts, it can fail to properly check out the license file if one of the following occurs:

- The license increment that starts the application is proper but the usability increment contains an error.
- The Softimage License Server daemon was running when Avid|DS RP was started, but the Daemon is halted shortly after, causing the licensing error.

To verify if there are any errors in the usability increment of the license file

1. Click the **Start** button and choose **Programs** > **Softimage Products** > **Licensing** and choose **LicTools**.
2. Open the Existing License file and click **Validate**.
3. Look for highlighted text in the RP license increment. If any, correct the error or request a replacement to the license text from Softimage Licensing.

To verify if the license server daemon was halted

1. Right-click on the Windows taskbar and choose **Task Manager**.
2. Select the **Processes** tab.
3. Locate the **lmgrd.exe** and **Softimage.exe** processes. If only lmgrd.exe is shown without the accompanying Softimage.exe process, this proves that the daemon is down. The cure is in the next question.

I've checked the networking connection, the license server, and the license, and I still get an error on the Avid|DS RP.

Problems with the Hosts file on the client workstation may prevent the network from matching the names of the systems with their network IP addresses. This can be confusing as the network may appear to be functioning properly since you can link to the Audio and Video Storages without problems.

1. Browse to the **C:\WINNT\system32\driver\etc folder** and locate the **Hosts** file.

2. Right-click on the Hosts file, choose **Open with**, then select **Notepad**.

   This is what you will see as default:

```
# Copyright (c) 1993-1995 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows NT.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#      102.54.94.97     rhino.acme.com          # source server
#       38.25.63.10     x.acme.com              # x client host

127.0.0.1       localhost
```

3. On the client workstation, add a line with the IP Address and DNS name of the RP station as shown below (*rpstation* being the DNS name of the RP station).

```
#     102.54.94.97    rhino.acme.com    # source server
#      38.25.63.10    x.acme.com        # x client host

127.0.0.1        localhost
100.100.100.10   rpstation
```

4. On the RP station, add a line with the IP address and DNS name of the client workstation.

You can be more specific by including a domain if the system is on one. For example:

```
100.100.100.10   rpstation.dsland.com
```

What can cause the Softimage License Server daemon to stop?

The vendor daemon will be stopped if the network configuration IP Address used is not of a valid class. Private or test classes may cause the vendor daemon to automatically stop. This prevents Avid|DS RP from validating the license text on the Avid|DS workstation. Verify with your system administrator or Internet service provider that your network address is valid.

Example: Although 10.10.10.01 is valid for a private workgroup of computers, the Softimage License Server will reject this IP Address and shut down the daemon.

Avid|DS RP reports that it cannot find some files.

The needed files are linked to the project in a local folder on the Avid|DS workstation and are not accessible from the Avid|DS RP station.

- Make sure the linked files can be shared identically from both the Avid|DS workstation and RP system (example: *computername*\Files*files_to_use*), or copy the linked files into your project folder.
- The expected files are irrelevant to the project you're working on. If this occurs, look seriously for a potential virus infection of the system because Avid|DS RP uses VB scripting and can be affected by virus infections.

Processing is very slow on the Avid|DS RP station.

- If you are processing 3D DVE effects and the Avid|DS RP is not equipped with a supported OpenGL card, the processing is done in software mode and is much slower. Also note that the result may differ from the processing done on the Avid|DS workstation.
- The network connection should be at least 100 Mbps.
- The use of a network hub with multiple computers and traffic will affect media access and slow down processing. It is recommended to use a network switch to program and isolate the Avid|DS systems from the network group.
- The Avid|DS workstation is being used extensively for capture and playback. With or without the Avid|Throttle Manager installed, the media access to the Avid|DS RP station is greatly impacted. Do not use remote processing if you must do intensive media playback tasks with the Avid|DS workstation.
- The Avid|DS RP station is being heavily accessed at the same time by other applications.

The Avid|DS RP application is frozen or processing is interrupted with an error. What could cause this?

- The Avid|DS workstation was rebooted. This cuts off access to the media located on the workstation pointed to by the Media Indexer running on your workstation.
- There is an internal error in the sequence that causes the processing to fail. Try to process on the Avid|DS workstation to verify if the error is replicated locally as well.
- The system is running low on memory.
- Verify that all plug-ins are installed and properly licensed on the Avid|DS RP station.

What can I do to test the network access between my Avid|DS workstation and RP station?

Using Command Prompt (DOS window):

- Type PING followed by the IP Address of the other computer and press Enter. If you can communicate with it, it will return the following:

```
C:\>ping 192.100.10.01

Pinging 192.100.10.01 with 32 bytes of data:

Reply from 152.165.50.251: bytes=32 time<10ms TTL=128
Reply from 152.165.50.251: bytes=32 time<10ms TTL=128
Reply from 152.165.50.251: bytes=32 time<10ms TTL=128
Reply from 152.165.50.251: bytes=32 time<10ms TTL=128

Ping statistics for 152.165.50.251:
  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
  Minimum = 0ms, Maximum =  0ms, Average =  0ms
```

  Otherwise the ping command will return “timed out” error lines if the computer is not available or “Unknown host” if the host does not exist.

- Type **NET SHARE** and press Enter to display all shared locations, including the required Avid|DS shared folders.
- Type **IPCONFIG** and press Enter to display the current network configuration.

Avid|DS RP displays this error message when started: Failed to create project BasicProject: f:\DS Projects could not be found.

Make sure the DS Project path exists on the Avid|DS RP station, otherwise you must either reinstall the software and carefully choose the project location or access the operating system Registry Editor and modify the Avid|DS MainRoot key (contact Avid|DS Customer Service for help with registry modifications).

When starting Avid|DS RP, the hourglass icon appears for a brief moment, then nothing.

Although extremely rare, this can occurs after a software crash where a process in still running in the background and preventing a new process from being opened since you can run only one instance of Avid|DS at a time on any system.

To resolve this problem

1. Open Task Manager.
2. Select the **Processes** tab.
3. Locate any occurrence of a running ds.exe process. If any, click End Process and confirm its termination.

   Avid|DS RP should now start properly.

I have two Avid|DS RP licences and try to process to two remote processing stations, but the second station refuses to process.

Avid|DS RP licensing is processor based, not workstation-based. If the Avid|DS RP stations are dual processor, then both RP licenses are taken by the first RP station to be started and none are available for the second RP station.

Chapter 9 Managing Your Windows 2000 Workstation

In This Chapter...

This chapter contains information on your Avid|DS workstation and general guidelines on its maintenance and administration with the Windows 2000 operating system.

Folders Installed on Your System 137
Managing User Accounts. 140
Drive Maintenance. 144
About Striping 146
Creating a Stripe Volume 147
Importing Foreign Disks 154
Creating an Emergency Repair Disk 155

Folders Installed on Your System

When you install Avid|DS, seven folders are created to hold various system files, project files, as well as media and cache files:

Folder	Description	Location
\DS_v6.01	Contains the files required to run Avid|DS 6.01	C:\Program Files\Avid\DS_v6.01
\DS Archives	Contains information on archived projects	F:\DS Archives
\DS Projects	Contains the projects, sequences, and clips that you create in Avid|DS	F:\DS Projects
\DSPresets	Contains customized effects that you can use in Avid|DS when creating graphics, transitions, compositing, etc.	C:\Program Files\Avid\DS_v6.x\DSPresets
\VideoStorage	Contains the video media and cache files that you capture and bring into Avid|DS	D:\VideoStorage
\AudioStorage	Contains the audio media and cache files that you capture and bring into Avid|DS	F:\AudioStorage
\DSSystem	Contains system files	C:\Program Files\Avid\DS_v6.01\DSSystem

The DS_v6.x Folder

The Avid|DS executable and the various .DLL files required by the application are in the C:\Program files\Avid\DS_v6.01 folder.

Do *not* move or modify any of the folders in the \DS_v6.01 folder.

The \DS_v6.x folder contains the following folders:

Folder	Description
\Command Maps	Contains the command maps for the different views and layouts in Avid|DS
\DSPresets	Contains customized effects that you can use in Avid|DS when creating graphics, transitions, compositing, etc.
\Help	Contains all the files required to use the online help, which provides reference information on property editors, dialog boxes, parameters, interface elements, and tasks
\Preferences	Contains the user preferences and customized layouts, toolbars, and key maps

The DS Archives Folder

The \DS Archives folder is used by Avid|DS to keep track of archived projects.

The DS Projects Folder

The \DS Projects folder contains the projects that you create with Avid|DS. Each time you create a new project, you are prompted to select a location for the project folder. Although you may store project folders anywhere on a local disk, it's easier to manage projects if they're all stored in the \DS Projects folder.

The project folder contains the clips and sequences associated with a project. Each project folder also contains the \System folder.

- Do *not* move, delete, or modify the contents of the \System folder.
- Never manually move a project between Avid|DS workstations. Use the Archive/Restore feature of Avid|DS instead.
- The \System folder should be hidden. To hide specific file types, choose **Options** from the View menu in the Windows Explorer.

The \System folder contains the following information:

Source models: These data structures allow Avid|DS to manage the relationship between clips, sequences, and their media. Each time you capture media from a new source, Avid|DS creates a corresponding source model, which tracks the time span, quality, and location of the different media files captured from that source. When you play back a clip from that source, Avid|DS consults the appropriate source model to locate the media.

Dsprojectinfo: This file contains information about the project format and other project preference settings. For more information on project preferences, refer to *Creating a New Project* in the Avid|DS User's Guide.

The DSPresets Folder

The \DSPresets folder contains presets, which you can use to define effects, transitions, graphics tools, and so on. The presets that are shipped with Avid|DS are stored in this folder by default.

Avid|DS also creates a \DSPresets folder in each project folder. This lets you store user presets that are specific to a particular project with that project. You can also specify, as part of your user preferences, locations for your own and shared workgroup presets.

The VideoStorage Folder

The \VideoStorage folder contains individual folders for each project. Each folder contains the video media and cache files for that project. Each folder's name is generated by the software and is based on a unique identification string (called a *GUID*) that identifies each project.

The AudioStorage Folder

The \AudioStorage folder contains individual folders for each project. Each folder contains the audio media files for that project.

Do not delete audio or video media files or folders using Windows 2000 Explorer. If you want to delete a media file, use the Purge or Delete command in Avid|DS. For more information on deleting clips and/or purging media, refer to *Managing Media* in the Avid|DS User's Guide.

The DSSystem Folder

The C:\Program Files\Avid\DS_v6.01\DSSystem folder contains system files and several folders used by Avid|DS.

Folder	Description
\DSSystem	Contains the autosave files, viewer and test pattern bitmaps, some critical Avid|DS system files, and the crash log. Before modifying anything in this folder, contact Avid|DS Customer Service.
\Rsrc	A resource folder for the 3D database
\SoftDB	Contains the 3D database used by the 3D Warp effect

Managing User Accounts

Avid|DS makes full use of the Windows 2000 operating system. This includes multiple user accounts with your Avid|DS presets, layouts, and preferences preserved on an individual basis.

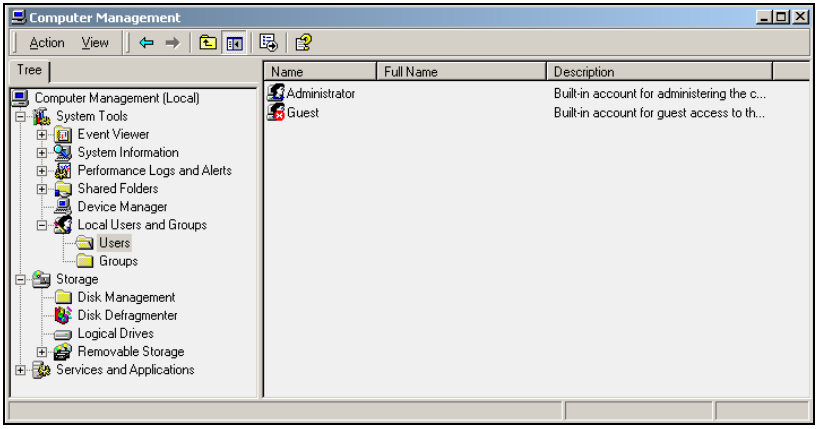
When you log on to a Windows 2000 workstation, you are accessing an environment associated with your user name. When you set any personal or project preferences while logged on, Avid|DS saves them to your user profile. For example, when you customize the Avid|DS desktop, the layouts that you create are saved with your user name. The next time you log on to that workstation, it recalls your previous settings.

When you first receive your Avid|DS system, the Windows 2000 operating system is already installed, and an administrator account is set up with a blank password.

You can change your password, and create and modify user accounts by accessing the Windows 2000 Computer Management console, which lets you define security features, such as permissions, rights, accounts, user groups, and audit policies.

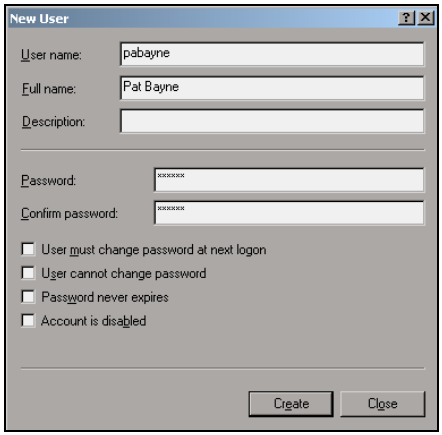
To create a user account

1. On the Windows desktop, right-click the **My Computer** icon and choose **Manage**.



2. Use the tree (left) to navigate to **System Tools** > **Local Users and Groups** > **Users**.

3. From the Action menu, choose **New User**.



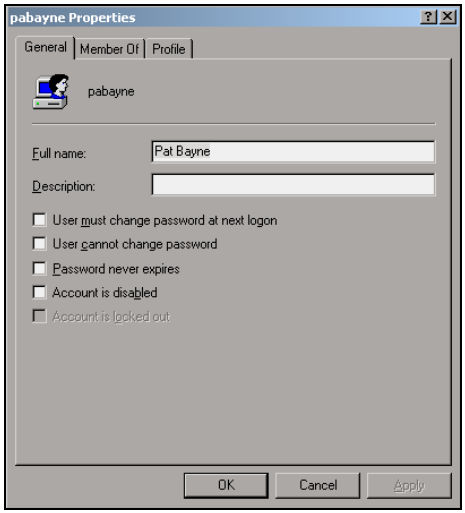
4. Enter the new user information and click **Create**.
5. Repeat step 4 until you're finished adding new users and click **Close**.

   The new user accounts are displayed in the Computer Management console.

To modify an account

1. In the Computer Management console, navigate to **System Tools** > **Local Users and Groups** > **Users**.
2. Double-click on the user account you want to edit.

   The <*username*> Properties dialog box is displayed.



3. Select the **General** tab to specify password options.
4. Select the **Member Of** tab to add the user to groups.

All Avid|DS users must be members of the Power Users group.

5. Select the **Profile** tab to specify and edit user profiles and logon scripts.
6. Click **OK** when you're finished.

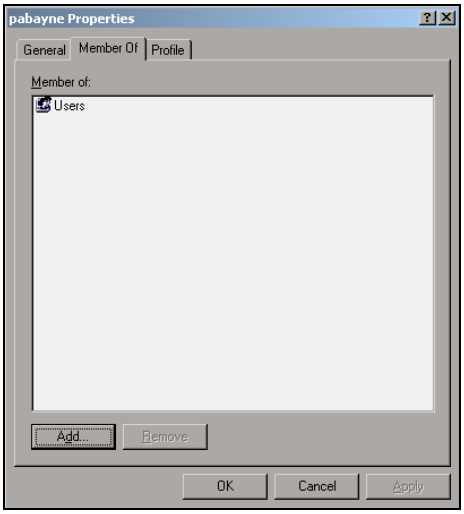
Creating Power Users

All users must be set up as Power Users in Windows 2000, so that they can use Avid|DS.

To add a user to the power user group

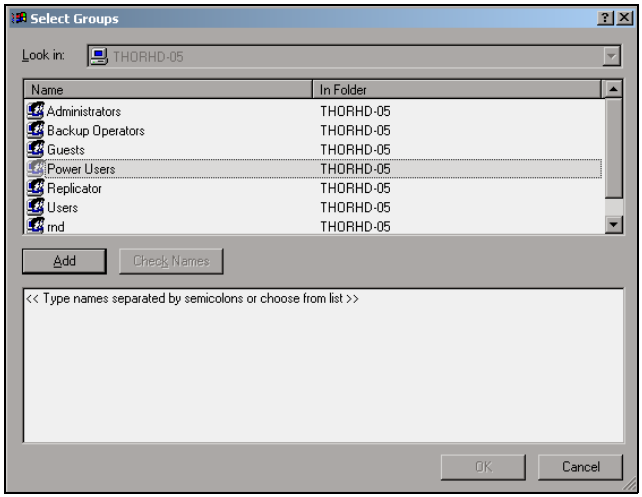
1. From the <*username*> Properties dialog box, select the **Member Of** tab.

   The following is displayed.



2. Click **Add**.

   The Select Groups dialog box is displayed.



3. In the upper pane, select **Power Users** and click **Add**.
4. Click **OK**.
5. In the <*username*> Properties dialog box, click **OK**.

To delete an account

1. In the Computer Management console, navigate to **System Tools** > **Local Users and Groups** > **Users**.
2. Right-click on an account and choose **Delete**.

Drive Maintenance

To prevent problems, you should keep at least 10% of the disk space on each drive free at all times. Keep in mind that during video media archiving, drive D: (Video Storage drive) is used to store files for any alpha material in the project.

When you run Avid|DS, it creates two interactive cache files on the Video Storage drive. These two files (DS_interactive_cache.tmp and DS_interactive_cache.tmp.lowres) can use up as much as 500 megabytes of your video storage area, and are mandatory for Avid|DS.

If there isn't enough available space for these files to be created, the system performance will drop dramatically. You may even experience a system failure. You should regularly purge unnecessary media files from the system to allow Avid|DS to work properly. For more information, refer to *Purging Media* in the Avid|DS User's Guide.

Defragmenting your Drives

Performing a defragmentation on the disk drives helps to maintain your system's performance. The following is a suggested defragmentation schedule:

Drive	Frequency
C:\ (System disk)	Once a month, if required
D:\ (VideoStorage)	Once a week if workload is minimal; every day if workload is intensive
F:\ (Projects/Audio)	Once a month if workload is minimal; once a week if workload is intensive

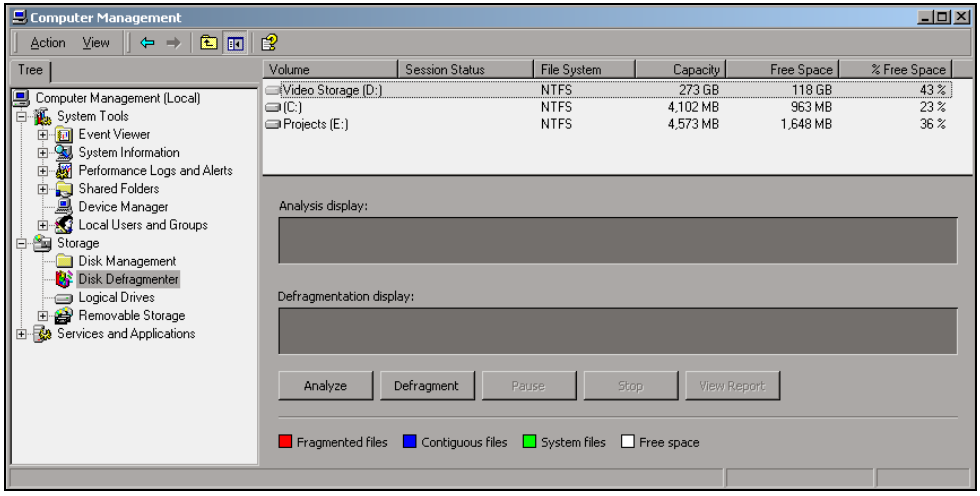
On Windows 2000 workstations, you can use the Windows 2000 Disk Defragmenter utility to defragment your disk drives.

Do *not* defragment your drives while Avid|DS is capturing, outputting, or processing media.

To defragment the drives on Windows 2000 workstations

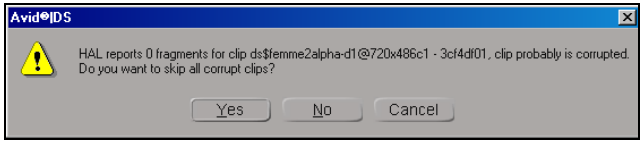
1. On the Windows desktop, right-click the **My Computer** icon and choose **Manage**.

   The Computer Management console is displayed.



2. Use the tree (left) to navigate to **Storage** > **Disk Defragmenter**.
3. Right-click on the disk you want to defragment and choose **Defragment**.

You cannot run Disk Defragmenter on a MediaNetwork Unity system becuase it has a different file system than a normal disk used in your Microsoft operating system. If you attempt to Defragment a MediaNetwork Unity system you will receive the following error.



About Striping

Striping is the process of configuring hard drives to allow the system to see two or more drives as a single drive. When you transfer files to striped drives, the files are split between the drives, and the data transfer rate increases. Striping is required to work with uncompressed and high video resolutions. Keep in mind the following when striping drives:

- Avid|DS requires at least eight drives striped together to sustain real-time performance.
- Hard drives of different sizes cannot be striped. For example, you can stripe eight 36-GB drives or eight 18-GB drives, but you cannot stripe four 36-GB drives and four 18-GB drives together.
- Striping drives deletes any material on them.
- Striping is cumulative. For example, when you stripe eight 36-GB drives, you can create an approximate 288-GB partition.
- If one drive in a striped volume becomes damaged or inoperable, the data on the remaining drives are lost.
- The capability for striping drives is built into the Windows 2000 operating system.

Creating a Stripe Volume

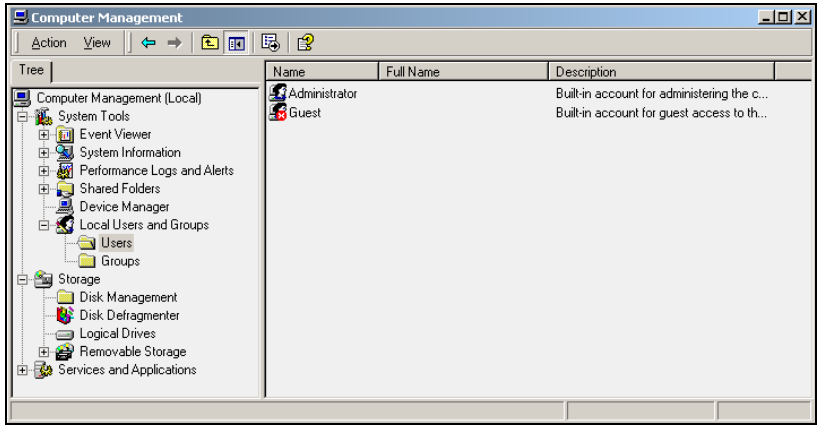
With Windows 2000, the disks in a stripe volume must be dynamic disks. Since disks are not usually shipped in this format, you may need to upgrade your disks before you can stripe them. The Disk Manager in the Computer Management console automatically detects whether your disks need to be upgraded to dynamic disks.

If you attempt to create a stripe volume from non-Avid drives, Avid makes no representation that the stripe volume will perform to Avid specifications for your application or sequence. Consequently, Avid|DS Customer Service will not be able to support any system issues caused by the non-Avid drives or the stripe volume.

To upgrade to dynamic disks

1. On the Windows desktop, right-click the **My Computer** icon and choose **Manage**.

   The Computer Management console is displayed.

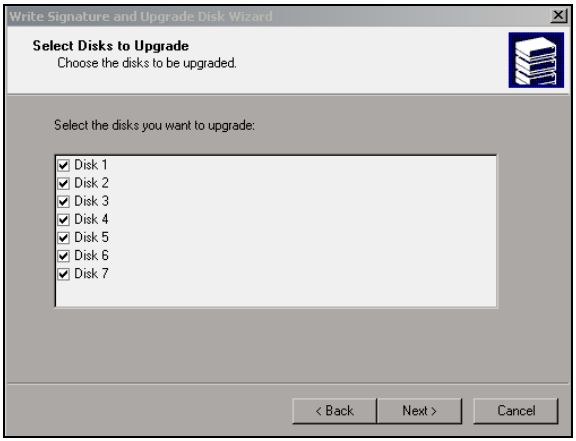


2. Use the tree (left) to navigate to **Storage** > **Disk Management**.

   If the disks in your storage array are not dynamic, the Write Signature and Upgrade Disk Wizard is displayed.

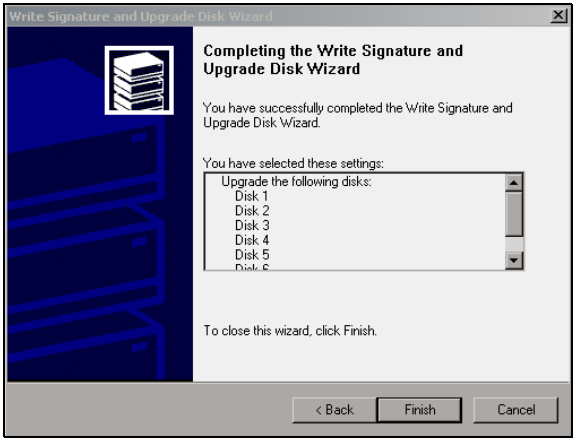
3. Click **Next**.

   The Select Disks to Upgrade dialog box is displayed.



4. Select the disks that need to be upgraded and click **Next**.

   The Completing the Write Signature and Upgrade Disks Wizard is displayed.



5. Verify your selections and click **Finish**.

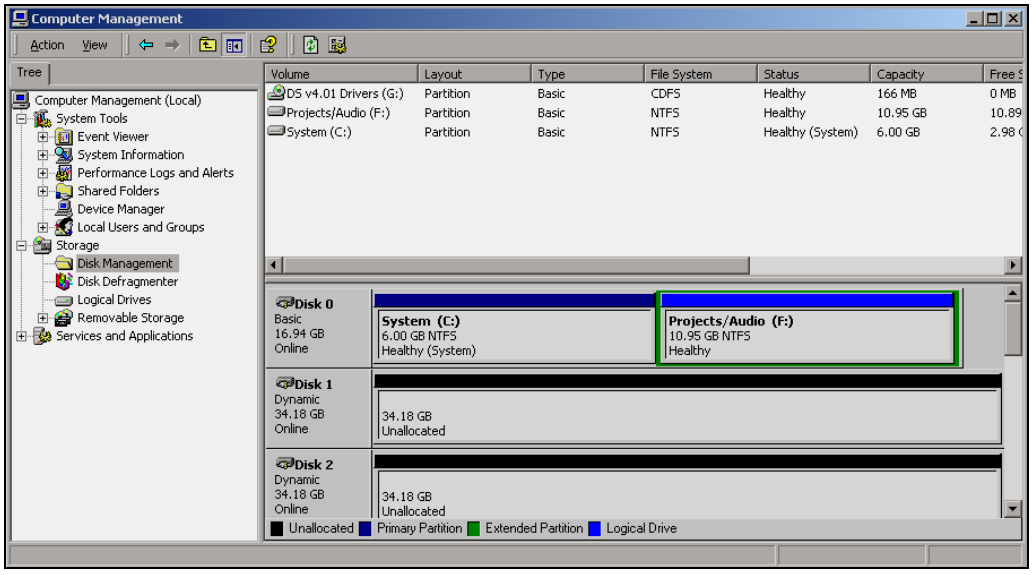
Striping the Drives

Once the disks in your storage array have been upgraded to dynamic disks, you can create the stripe volume.

To create a stripe volume

1. Right-click on My Computer and choose **Manage**.

   The Computer Management console is displayed.

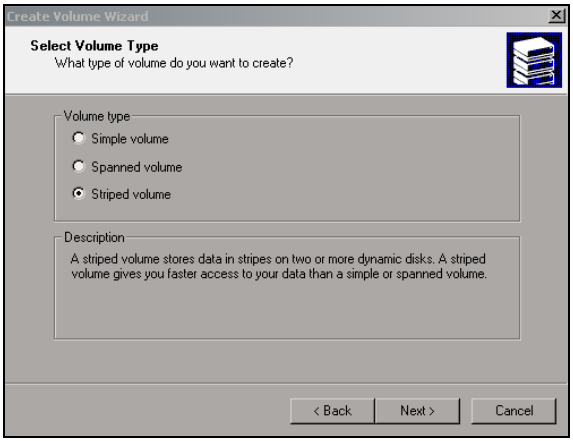


2. Use the tree (left) to navigate to **Storage** > **Disk Management**.
3. Right-click a disk in the stripe volume and choose **Create Volume**.

   The Create Volume Wizard is displayed.

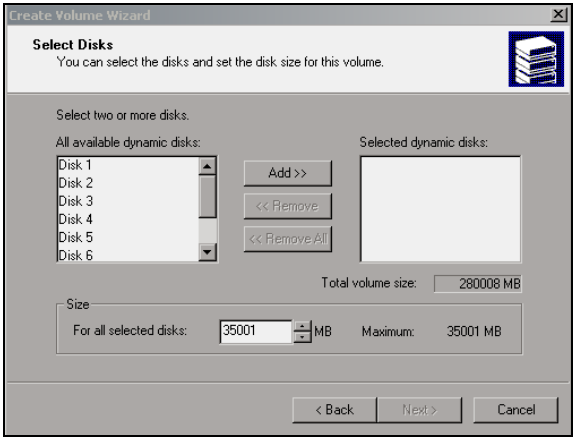
4. Click **Next**.

   The Select Volume Type dialog box is displayed.



5. Select **Striped Volume** and click **Next**.

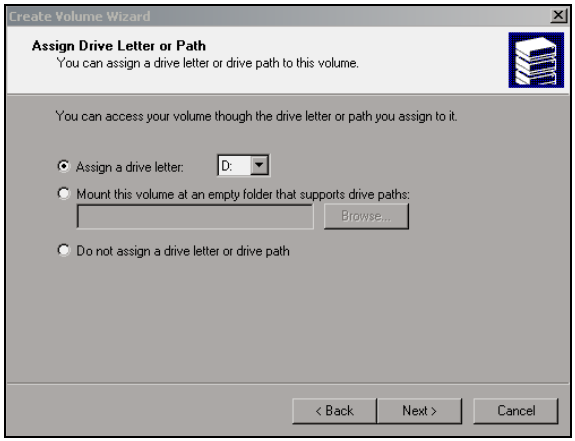
   The Select Disks dialog box is displayed.



6. In the All available dynamic disks box, select each of the disks in the stripe volume and click **Add**>>.

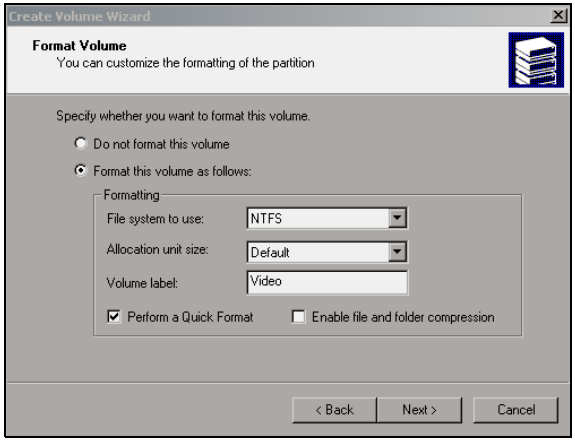
7. When you're finished, click **Next**.

   The Assign Drive Letter or Path dialog box is displayed.



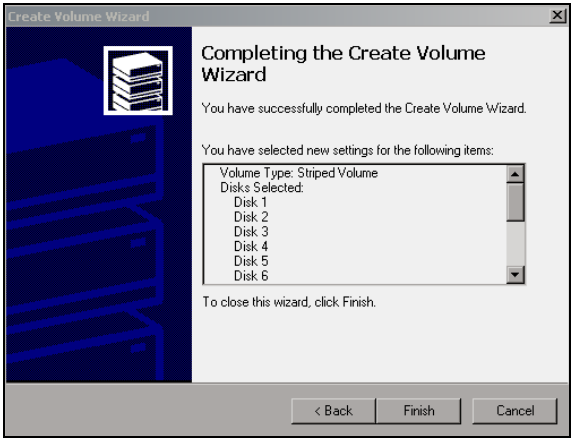
8. Select the appropriate drive letter for your video storage (normally D:) and click **Next**.

   The Format Volume dialog box is displayed.



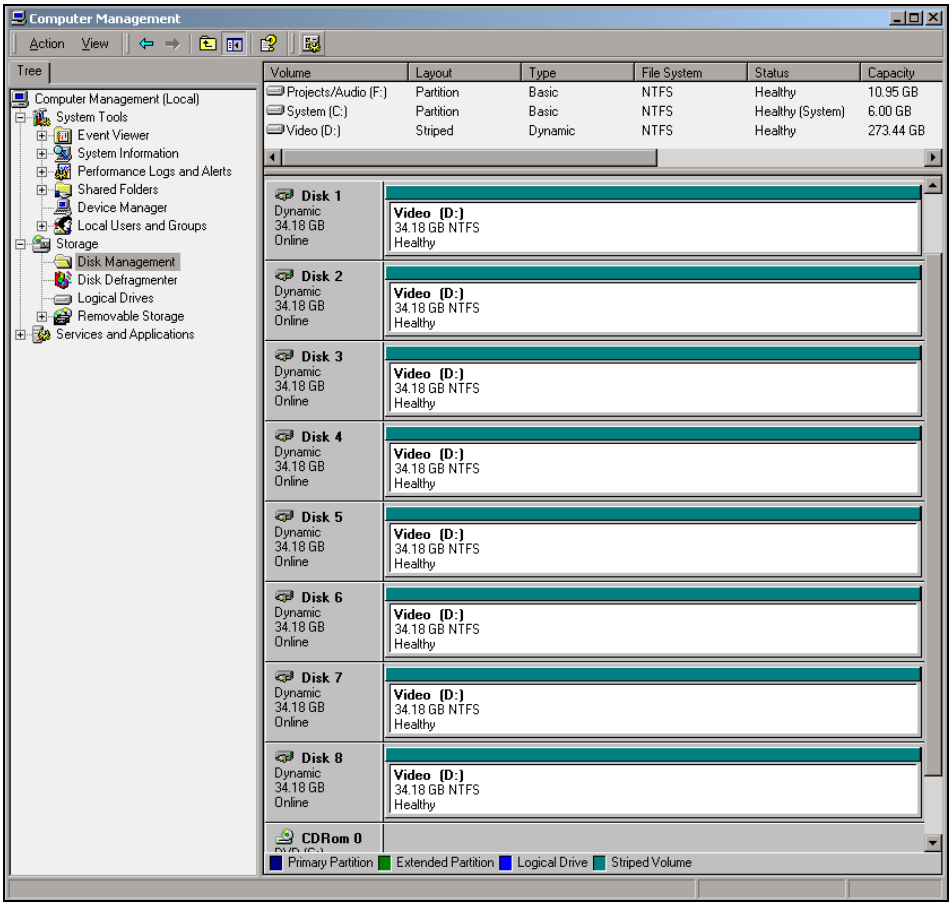
9. Select **Format this volume as follows** and set the following:
   - File system to use: NTFS
   - Allocation unit size: Default
   - Volume label: Video
   - Perform a Quick Format: Selected
   - Enable file and folder compression: Deselected
10. Click **Next**.

    The Completing the Create Volume Wizard is displayed.



11. Verify your settings and click **Finish**.

    Your video storage drives are striped and formatted.



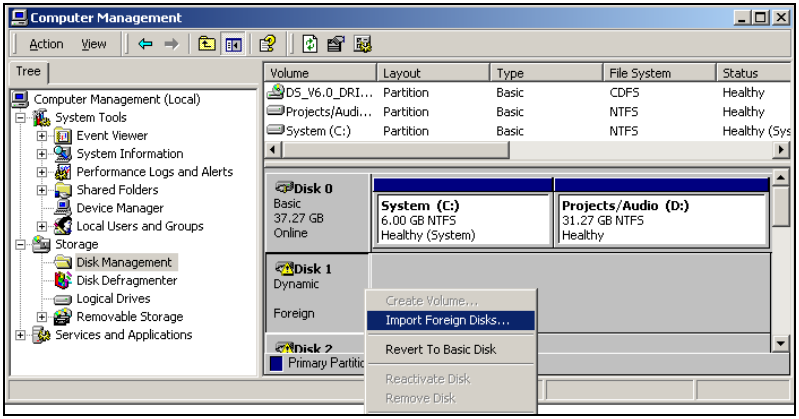
Importing Foreign Disks

If you have used a Recovery CD, or you have transferred a volume set from one Windows 2000 system to another, your stripe volume will not display all the disks.

You will have to import the stripe disks into your Disk Management configuration.

To import the disk into the system

1. On your Windows desktop, right-click the **My Computer** icon and select **Manage**.
2. From the Action menu, select **All Tasks** > **Import ForeignDisks**.



3. Follow the instructions that are displayed on the screen to recreate your stripe set.

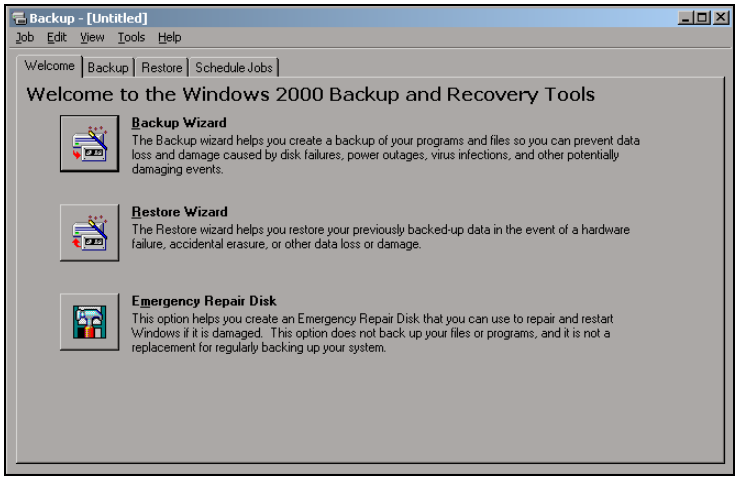
Creating an Emergency Repair Disk

An emergency repair disk can help you recover from a system failure in which the operating system has become corrupted. You should create a repair disk after any addition to the system, be it software or drivers.

To create an emergency repair disk

1. Click the **Start** button and choose **Programs** > **Accessories** > **System Tools** > **Backup**.

   The Backup utility is displayed.



2. Click **Emergency Repair Disk**.

   You are prompted for a blank formatted diskette.

3. Insert the diskette into drive **A:** and click **OK**.
4. Follow the onscreen instructions to create the emergency repair disk.
5. When you're finished, remove the diskette from the drive, label it, and store it in a safe place.

You can make duplicates of the diskettes or save their contents on another storage device for added security.

Chapter 10 Using the Recovery CD

In This Chapter...

This chapter describes how to use the Avid|DS 6.0 Recovery CD to rebuild the C: partition of your Avid|DS workstation with Windows 2000 Professional, Service Pack 2, Avid|DS 6.01, and all drivers, excluding firmware.

Installing the Recovery CD 159

Complete Rebuilding the System 160

Installing the Recovery CD

Since this version of Avid|DS is supported on two different platforms, there are two Recovery CDs in your box.

- One for the Compaq EVO W8000 that has two options:
  - Recover the C: partition only as it is on the system
  - Recovery the C: partition and make it larger and resize the F: partition by making it smaller.
- One for the IBM 6866 Z Pro that has only one option, to recover the C: partition.

When you install the Recovery CD, you overwrite and lose all of the data on your C: partition (and, if selected, the F: partition on a Compaq). Therefore, before you attempt to install the recovery CD:

1. Make a backup of your Softimage.lic license file.
2. Back up your F: drive files and folders (they could be moved to a striped volume or other external storage).
3. Backup all of the important data from the C: partition before you continue.
4. Make backups of your plug-in license files and have the software on hand for later reinstallation.
5. You should also save all important preferences, layouts, network IP addresses, or user-specific files.
6. Save the 25 character Product ID from the left side of your Compaq workstation or behind the front door of the IBM 6866 Z pro system.

To install the recovery CD

1. Insert the Recovery CD for your system, and start your workstation.
2. Follow the instructions that appear online. Note that you might want to choose to restore both the C: and F: partitons if you are on a Compaq W8000 system.
3. After the restore, remove the CD from the system.
4. You are asked to Shutdown the system to allow the firmware in some boards to properly reset.
5. After one minute restart the system.

   After the system is fully restarted, log on to Windows 2000 as Administrator; no password is required.
6. Enter your **Product ID** when you are prompted for your Microsoft Product ID.
7. Complete the operating system basic settings, such as Date & Time and Time Zone, network configuration, etc.

Complete Rebuilding the System

Once you have installed the recovery CD you need to perform a few remaining steps before the system is fully functional:

1. When you loaded the recovery CD and restarted the system, the Microsoft operating system might have assigned different drive letters to your drivers. Although this does not cause problems for Avid/DS, you might need to reassign the original drive letters for other programs.‘
2. Reinstall the Softimage.lic license file. See *Installing Avid|DS* on page 88.
3. If you are using the Recovery CD to upgrade your system, you must install the new firmware in the Avid Equinox sub-system (See *Installing the Avid Equinox Video Subsystem Driver* on page 69).
4. If you had striped volumes on the system you must reconnect them. See *Importing Foreign Disks* on page 154.
5. Configure your network adapter if required.
6. Install the latest drivers and Avid|DS QFEs (if any).

   See *Upgrading Your Workstation* on page 61 the list of drivers you need to install after you use the Recovery CD.

We suggest you use Avid|DS “as is” to determine if the source of the problem has been fixed by the recovery installation. You can add additional software and devices one at a time, but be sure to perform short tests each time you install new software.

A

accounts, managing 140
Adaptec card connections 29
administrator privileges 121
attaching software protection key 59
ATTO card connections 30
audio devices, connecting 57
AudioStorage folder 137, 139
Avid |DS
  software and services 85
Avid Equinox Break-Out-Box 44
  connecting 46
Avid Equinox PCI card connections 29
Avid Equinox subsystem
  installing Avid firmware 68
  installing driver 69
Avid Media Indexer 86
Avid MediaDock LVD, connecting 47
Avid Project Indexer 86
Avid Unity MediaNet 52
  installing ATTO card 52
Avid|DS
  discussion group 6
  indexing services 86
  installing 88 to 96
  managing workstation 135 to 155
  uninstalling 79
  workgroup, preparing setup 87
Avid|DS RP
  CPU usage 118
  installing 123 to 127
  licensing 128
  requirements 117
  troubleshooting 130 to 134
Avid|Throttle Manager 116
  installing 129

B

back panel, workstation 27
BIOS
  installing in Compaq W8000 65
  installing in IBM Z Pro 66

C

cables 46, 47
  machine control, assembling 53
capture, signal flow 33
cards 27
  Adaptec card connection 29
  ATTO card connections 30
  Avid Equinox PCI card connections 29
  Mykerinos audio card connections 29
  signal flow, capture/playback 33
client workstation 115
Compaq, installing SCSI drivers 73
computer monitors, connecting 43
concepts, remote processing 115
  client workstation 115
  floating license 116
  remote processing station 115
configuration, network 119
connecting hardware 42
  audio devices 57
  Avid Equinox Break-Out-Box 46
  Avid MediaDock LVD 47
  computer monitors 43
  keyboard 42
  monitors 43
  mouse 42
  peripheral devices 55
  tablet 42
  video devices 55
  WACOM tablet 42
connections, card
  Adaptec 29
  ATTO 30
  Avid Equinox PCI 29
  Mykerinos 29
contents, Avid|DS system 15
  documentation 17
  hardware 15
  software 16
conventions 9
  keyboard, mouse, and pen 9
CPU usage, Avid|DS RP stations 118
customer support 10

D

defragmenting drives 144, 145
  schedule 144
deleting
  user accounts 143
devices
  audio, connecting 57
  peripheral, connecting 55
dimensions
  hardware 23
DIP switches 58
discussion group, Avid|DS 6
disk
  emergency repair 155
  importing foreign 154
Disk Defragmenter 144
disk drives 31
  Low-Voltage Differential Signaling 31
  LVDS 31
  standard configuration 31
document conventions 8
documentation 17
Documentation Library 7, 8
domain configuration, networking 120
dongle (software protection key) 105
  attaching 59
drive maintenance 144
  defragmenting 144
drivers
  installing 64
drives
  striping 149 to 153
DS Archives folder 137, 138
DS Presets folder 137, 138
DS Projects folder 137, 138
  Dsprojectinfo 138
  source models 138
DS System folder 137, 139
  Rsrc 139
  SoftDB 139

DS_v6.0 folder 137
Dsprojectinfo 138
DUA II
  DIP switches 58
  sample rate 58
  synchronization 58

E

electrical requirements 21
  specifications 22
emergency repair disk 155
Enclosure Service Module (ESM) 47
environmental requirements 21
Equinox Break-Out-Box, connecting 46
Equinox PCI card 29
ESM 47, 50, 51

F

Flexid 105
floating license 116, 128
folders, installed 137
  AudioStorage 137, 139
  DS Archives 137, 138
  DS Presets 137, 138
  DS Projects 137, 138
  DS System 137, 139
  DS_v6.0 137
  Rsrc 139
  SoftDB 139
  VideoStorage 137, 138
fonts
  installing 98
  non-European, installing 100
  removing 98
  TrueType 98
  Type 1 98
foreign disks, importing 154
forum, Avid|DS 11

G

graphic tablet 9
GUID 138

H

hardware 15, 24
  dimensions 23
  specifications 23
hardware, connecting 42
  computer monitors 43
  keyboard 42
  monitors 43
  mouse 42
  tablet 42
  WACOM tablet 42
help, online
  Documentation Library 8
hotline support 10
house sync 24

I

I/O module 51
importing
  foreign disks 154
indexing services
  Avid Media Indexer 86
  Avid Project Indexer 86
input and outputs, system 32
installing
  Avid|DS 88 to 96
  Avid|DS RP 123 to 127
  Avid|Throttle Manager 129
  fonts 98
  non-European fonts 100
  Recovery CD 159
  system and Avid drivers 64
  Wildcat (graphic board) driver 71
installing Avid drivers
  Avid Equinox subsystem driver 69
  Merging Mykerinos (audio board) driver 70
  SCSI drivers 73
installing Avid firmware
  Avid Equinox subsystem firmware 68
installing system BIOS
  Compaq W8000 65
  IBM Z Pro 66
installing system drivers
  Intel chipset 75
  Intel Pro100 Network 75
  Logitech mouse 76
  Soundblaster AuioPCI128 77
Intel chipset, installing system driver 75
Intel Pro100 Network, installing system driver 75
internal sync 56

K

key, software protection 59
keyboard conventions 9
keyboard shortcuts 7
keyboard, connecting 42

L

license
  dongle 105
  file 59
  file, creating 108
  Flexid 105
  floating 116, 128
  problems 110
  requesting 105
  troubleshooting 110
licensing Avid|DS RP 128
list, mailing 11
Logitech mouse, installing system driver 76
Low-Voltage Differential Signaling (LVDS) SCSI disk drive 31
LVDS SCSI disk drive 31

M

machine control cable, assembling 53
mailing list 11
maintaining drives 144
  defragmenting 144
managing
  Avid|DS workstation 135 to 155
  user accounts 140
MediaDock LVD
  connecting 47
  drives 31
MediaNet 52
  installing ATTO card 52

Merging Mykerinos audio board, installing Avid driver 70
models, source 138
module
  ESM 50, 51
  I/O 51
  SRM 50, 51
monitors, connecting 43
mouse
  connecting 42
  conventions 9
Mykerinos card connections 29

N

network
  administrator privileges 121
  configurations 119
  hardware performance, optimizing 122
  optimizing 121
  privileges, administrator 121
  protocol 121
  remote processing performance, optimizing 122
  TCP/IP protocol 121
networking configurations 119
  domain 120
  point-to-point 119
  workgroup 119
networking protocol 121
non-European fonts, installing 100

O

online help 7
optimizing
  hardware performance 122
  network 121
  remote processing performance 122
outputs and inputs, system 32

P

package contents 15
  documentation 17
  hardware 15
  software 16
pen
  conventions 9
peripherals 24
  devices 55
peripherals, hardware 24
phone support 10
PICVideo MJPEG codec, removing 79
planning, site 21 to 23
  electrical requirements 21
  environmental requirements 21
  space requirements 22
playback, signal flow 33
plug-ins
  loading 97
  removing 79
point-to-point network configuration 119
port locations 30
Power Users group 142
privileges, administrator 121
problems, license 110
protocol, networking 121

R

rebuilding system 160
Recovery CD, installing 159
remote processing 115
  Avid|DS RP station requirements 117
  concepts 115
  CPU usage 118
  requirements 117
  station 115
  troubleshooting 130 to 134
removing
  Avid|DS 80
  fonts 98
  plug-ins 79
  TrueType fonts 98
  Type 1 fonts 98
repair disk 155
requesting license 105
requirements 21 to 23
  Avid|DS RP 117
  electrical 21
  environmental 21
  space 22
Rsrc folder 139

S

sample rate
  DUA II 58
SCSI cable 48, 49, 51
SCSI disk drive, LVDS (Low Voltage Disk Drive) 31
SCSI, installing system drivers 73
Shortcut card 7
shortcuts
  keyboard 7
signal flow 33
  capture 33
  playback 33
single enclosure configuration 48
site planning requirements 21 to 23
  electrical 21
  environmental 21
  space 22
SoftDB folder 139
Softimage Licensing program
  verifying 106
software 16
software protection key (dongle), attaching 59
Soundblaster AudioPCI128, installing system driver 77
source models 138
space requirements 22
specifications
  electrical 22
  hardware 23
SRM module 50, 51
station, remote processing 115
storage
  Avid MediaDock LVD 47
storage configurations 48 to 51
  single enclosure 48
  three enclosure 50
  two-enclosure 1, 49
striping 146

creating stripe volume 147
drives 149 to 153
support 10
hotline 10
web 10
sync
internal 56
synchronization, DUA II 58
system contents 15
documentation 17
hardware 15
software 16
system folder
Dsprojectinfo 138
source models 138
system inputs/outputs 32
system requirements 21 to 23
electrical 21
environmental 21
space 22
system, rebuilding 160

T

tablet, connecting 42
TCP/IP networking protocol 121
technical support 10
telephone support 10
three enclosure configuration 50
Throttle Manager 116
troubleshooting
Avid|DS RP 130 to 134
license 110
TrueType fonts
installing 98
removing 98
two-enclosure configuration 1, 49
Type 1 fonts
installing 98
removing 98

U

uninstalling
Avid|DS 80
Avid|DS 4.01 79
fonts 98
plug-ins 79
TrueType fonts 98
Type 1 fonts 98
upgrading
system software 63
user accounts (Windows 2000)
adding user 142
creating 140
deleting 143
managing 140
modifying 141

V

video devices, connecting 55
VideoStorage folder 137, 138

W

WACOM tablet
connecting 42
web support 10
Wildcat graphics board, installing Avid driver 71
Windows 2000
managing workstation 137 to 155
workgroup
preparing setup 87
workgroup network configuration 119
domain 120
workgroups
client workstation 115
floating license 116
remote processing station 115
workstation, client 115
workstation
back panel overview 27
cards 27, 33
client 115
managing 135 to 155
port locations 30